

# HOUSING POLICIES

and

the rationale of Supply  
and Demand

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## **Part 1: Basic Concepts**

- Understanding how the housing sector works
- Principles of Supply and Demand
- Shifts in Supply and Demand
- Shortage and Surplus

## **Part 2: Housing Markets**

- Supply and Demand
- Government Intervention
- Applying the Axiom Supply-Demand in Designing Policies

## **Part 3: Principles of Policy Intervention**

- Enabling Housing Policies
- Do's and Don'ts in Policy Intervention

# PART 1

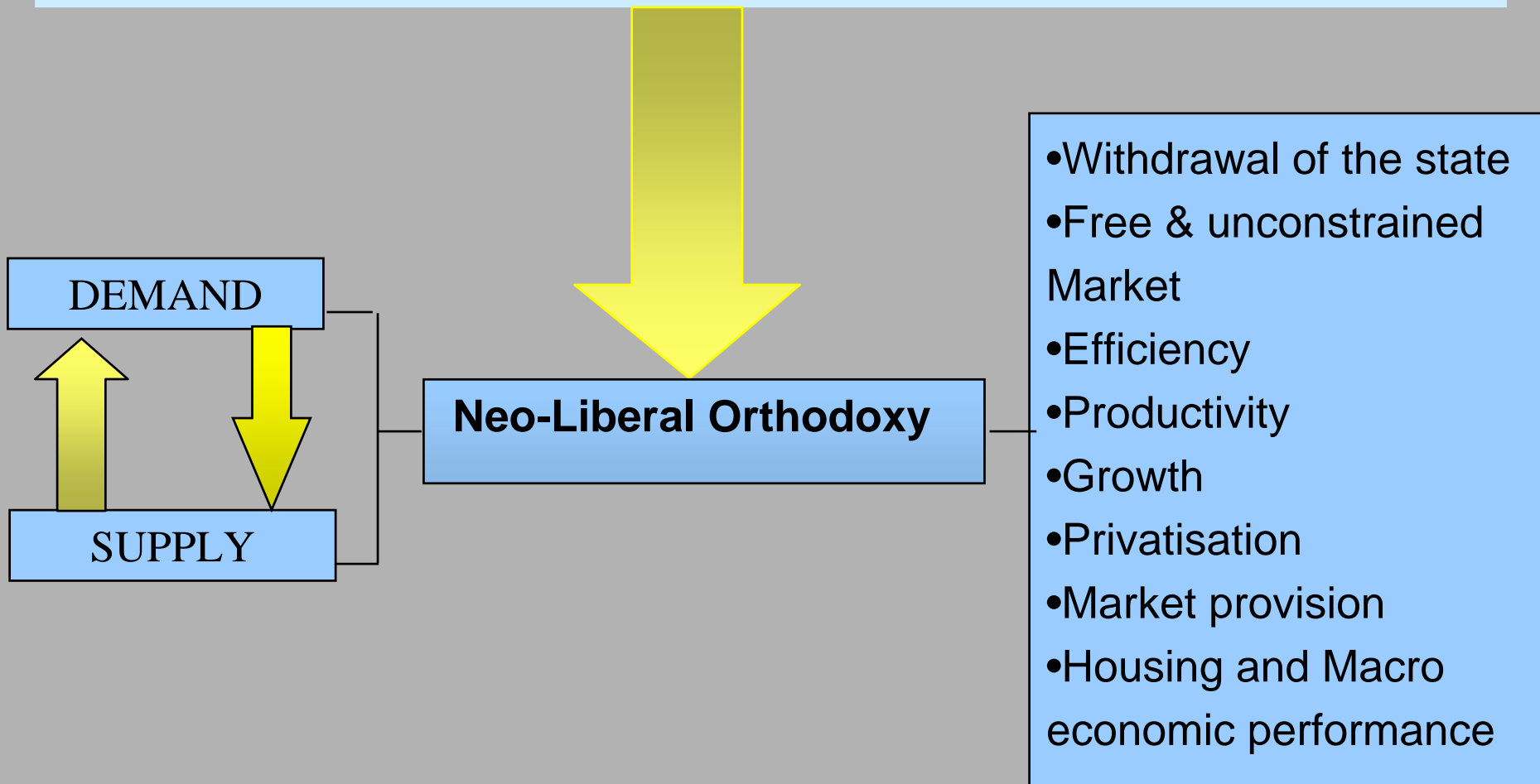
## Basic Concepts

# 1.

## Understanding How the Housing Sector Works

# PARADIGM SHIFT IN HOUSING POLICIES DURING THE 1990'S

based on neo-classical economics



# What are the major Inputs to Housing?

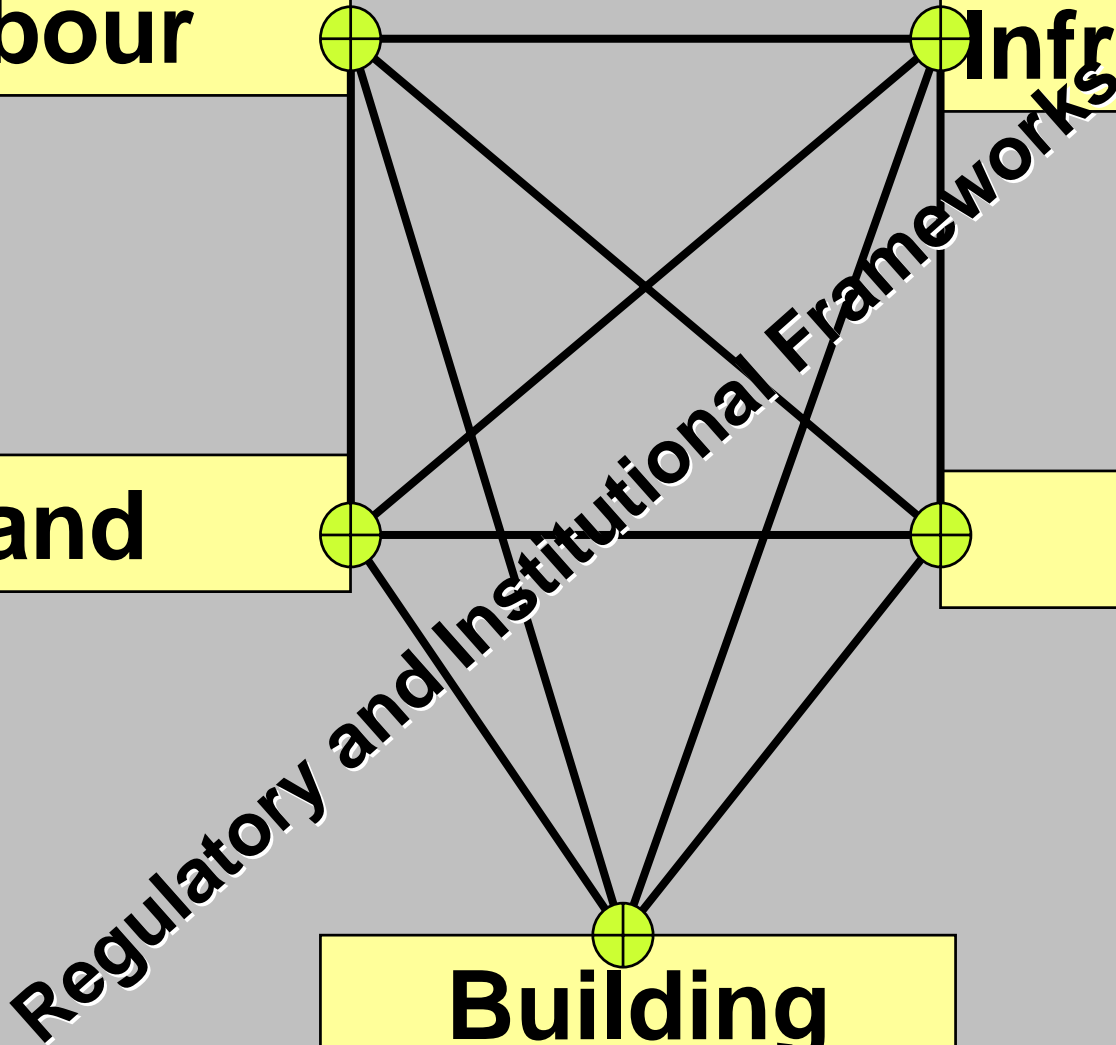
**Labour**

**Infrastructure**

**Land**

**Capital**

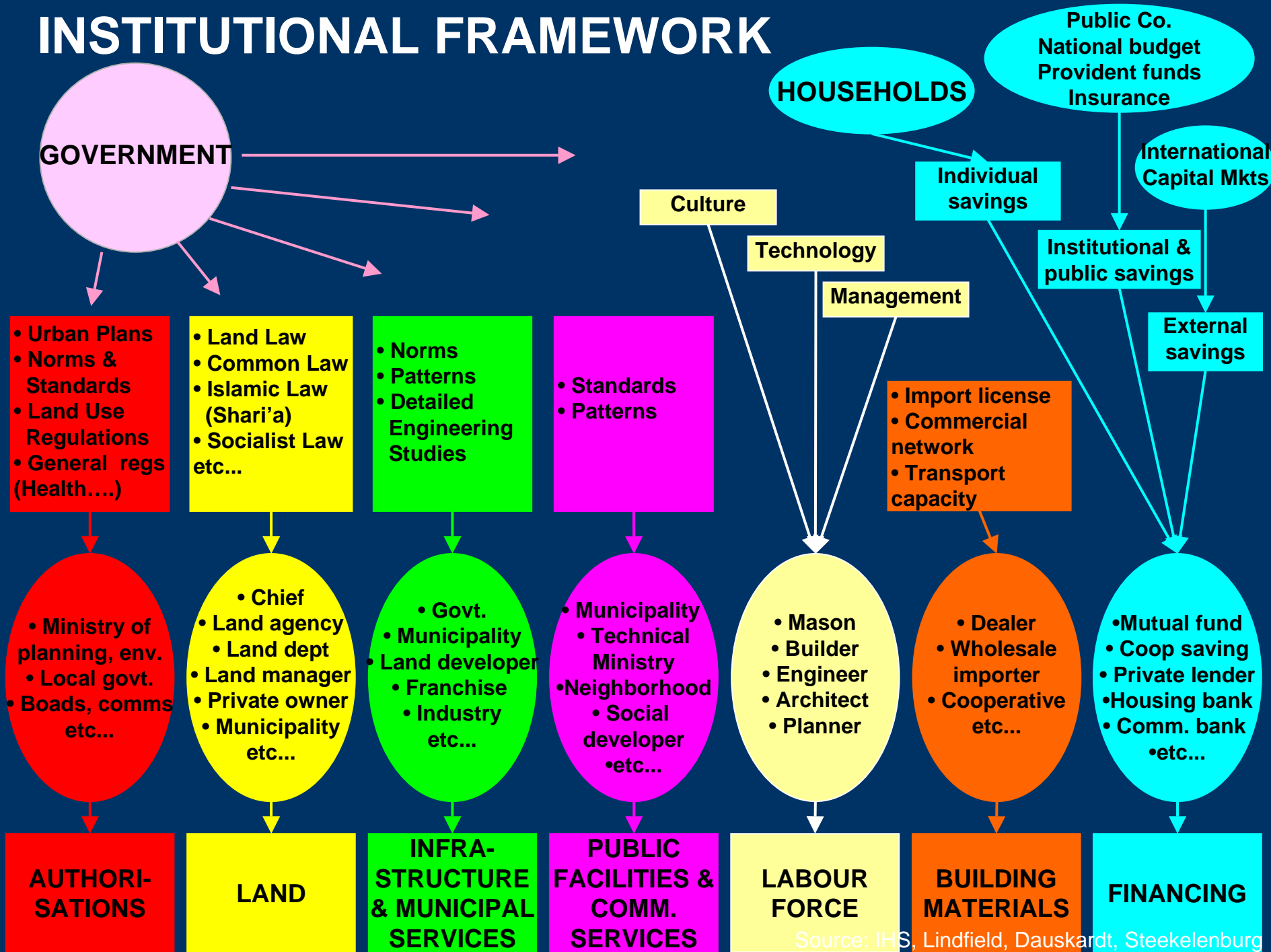
**Building  
Material**



# THE SEVEN COMPONENTS OF A HOUSING DELIVERY SYSTEM

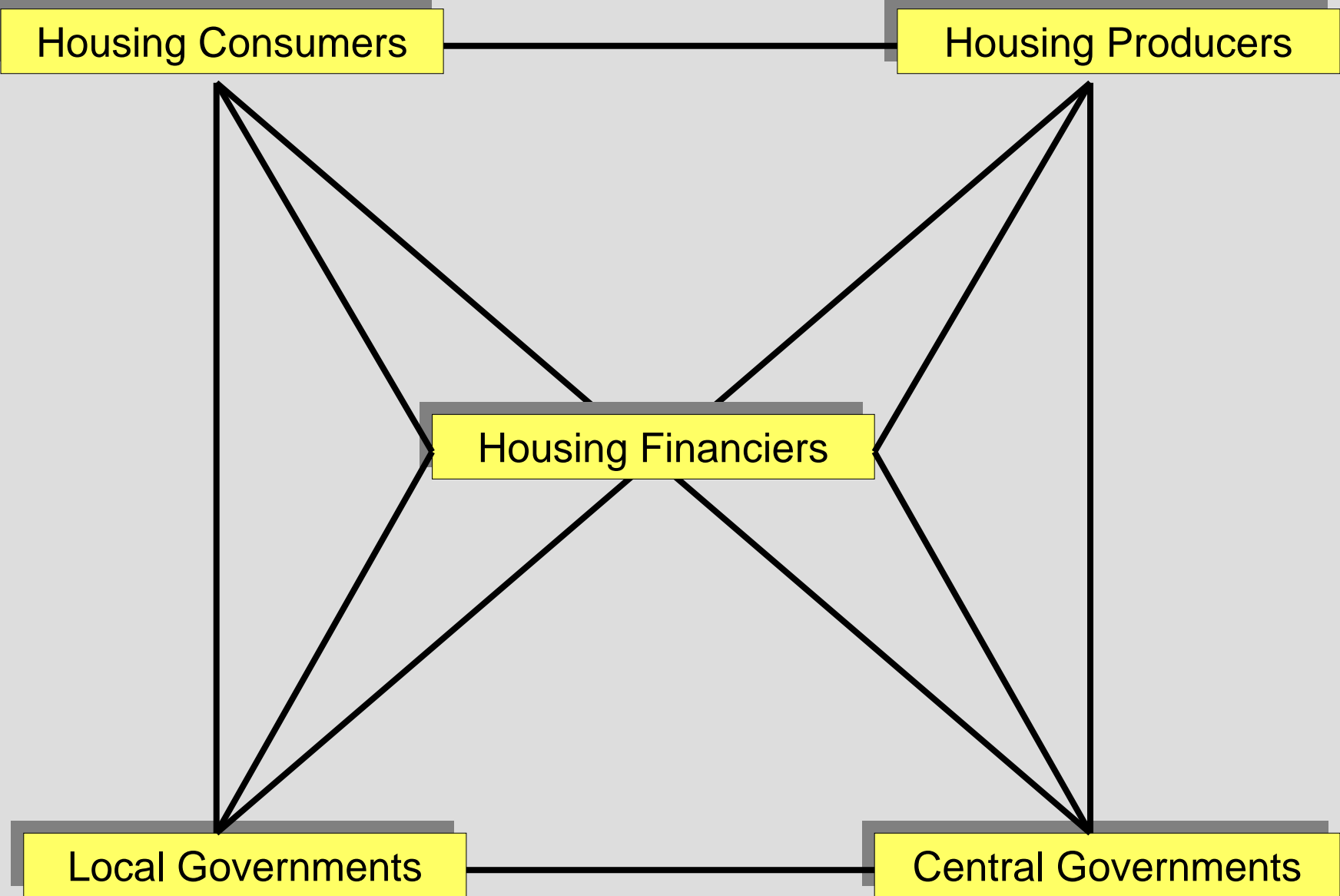
AUTHORISATIONS	LAND	INFRA-STRUCTURE MUNICIPAL SERVICES	PUBLIC FACILITIES COMMUNITY SERVICES	LABOUR FORCE	BUILDING MATERIALS	FINANCING
<ul style="list-style-type: none"> <li>• Land sub-division permit</li> <li>• Residency/ Occupancy permit</li> <li>• Building permit</li> <li>• Planning / Zoning permission</li> <li>• Concession</li> <li>• etc...</li> </ul>	<ul style="list-style-type: none"> <li>• PUBLIC</li> <li>• PRIVATE</li> <li>• Freehold</li> <li>• Leasehold</li> <li>• Waqf</li> <li>• Cooperative</li> <li>• Customary</li> <li>• etc...</li> </ul>	<ul style="list-style-type: none"> <li>• Roads</li> <li>• Water supply</li> <li>• Sewerage</li> <li>• Electricity</li> <li>• Drainage</li> <li>• Gas</li> <li>• Garbage collection</li> <li>• etc...</li> </ul>	<ul style="list-style-type: none"> <li>• Schools</li> <li>• Clinics</li> <li>• Mosque / church</li> <li>• Police</li> <li>• Post office</li> <li>• Playgrounds</li> <li>• Open spaces</li> <li>• Civic center</li> <li>• Cultural center</li> <li>• etc...</li> </ul>	<p>Technical (architect)</p> <p>Labour (builders)</p>	<ul style="list-style-type: none"> <li>• Wood</li> <li>• Concrete</li> <li>• Cement</li> <li>• Sand</li> <li>• Steel</li> <li>• Corrugated iron</li> <li>• Adobe</li> <li>• etc...</li> </ul>	<ul style="list-style-type: none"> <li>• DEBT</li> <li>• EQUITY</li> <li>• Land acquisition loan</li> <li>• Construction loan</li> <li>• Enterprise loan</li> <li>• Mortgage loan</li> <li>• Public subsidy</li> <li>• etc...</li> </ul>

# INSTITUTIONAL FRAMEWORK





# Multiple Actors and Specific Motivations



# SOME POINTS OF DEPARTURE 1

**ECONOMICS is the study of how society allocates its scarce resources to produce and distribute goods that are valued**

(Steinemann et al, 2005)

**Decisions that affect the public often depend on microeconomics** (Steinemann et al, 2005)

# SOME POINTS OF DEPARTURE 2

**“Economic principles for private sector and public sector decisions are similar, yet the goals and analyses differ”** (Steinemann et al, 2005)

## PRIVATE SECTOR

Maximises profit = total benefits – total costs

Benefits: revenues from Sales

Costs: expenditures on materials for production

## PUBLIC SECTOR

Goals + profit maximisation

Equity, employment, environmental protection, quality of life

Provide services even if doesn't generate monetary profit

Costs to society: environmental pollution

# EXAMPLE

## Land Development for New Houses

FROM THE PRIVATE SECTOR:

### Costs for society:

loss of trees (not included in developers' accounting)

### Benefits:

decrease of unemployment (not included either)

## Imposing a Tax

### Costs:

individual citizens and firms

### Government:

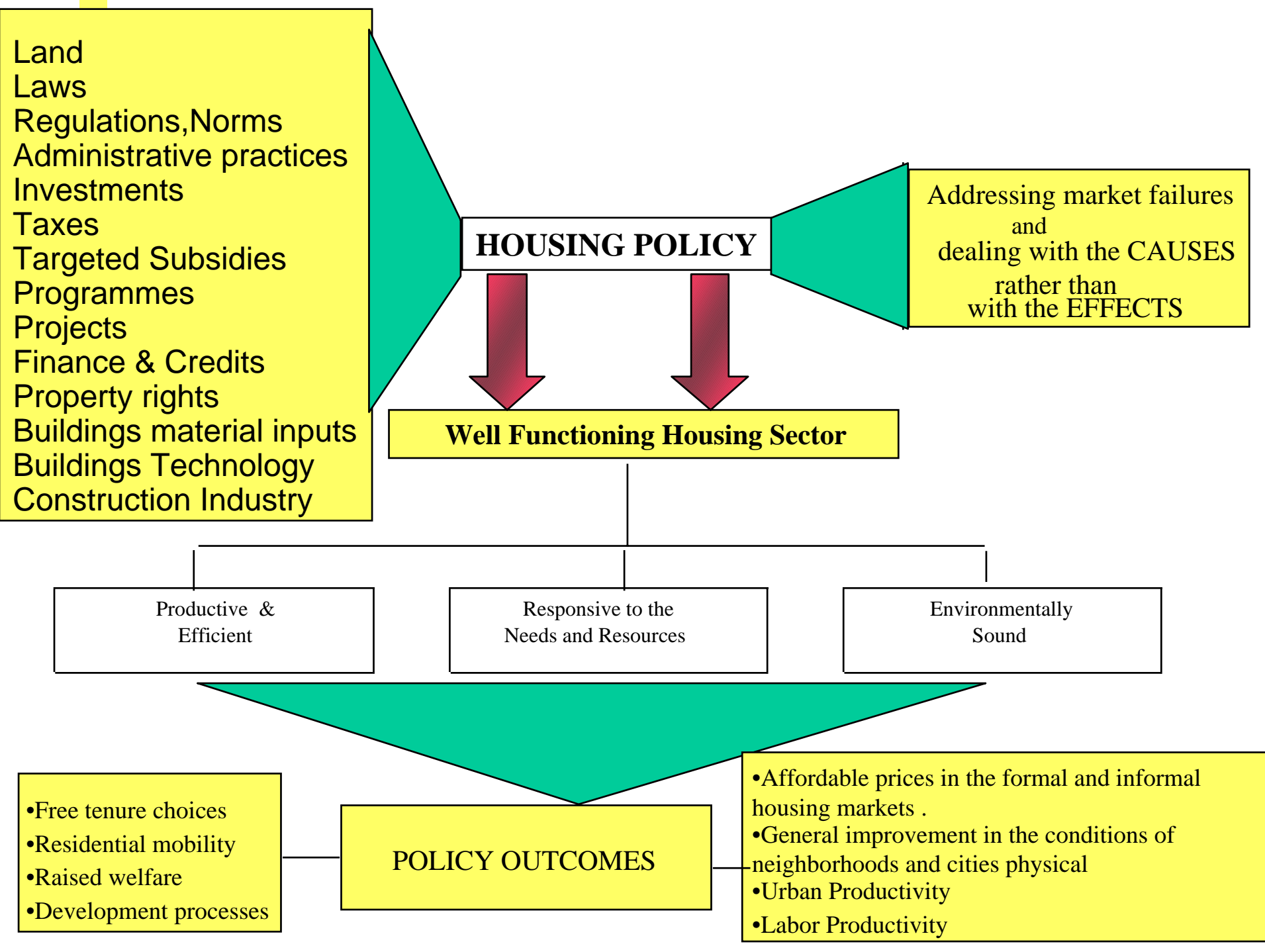
transfer of resources within the public

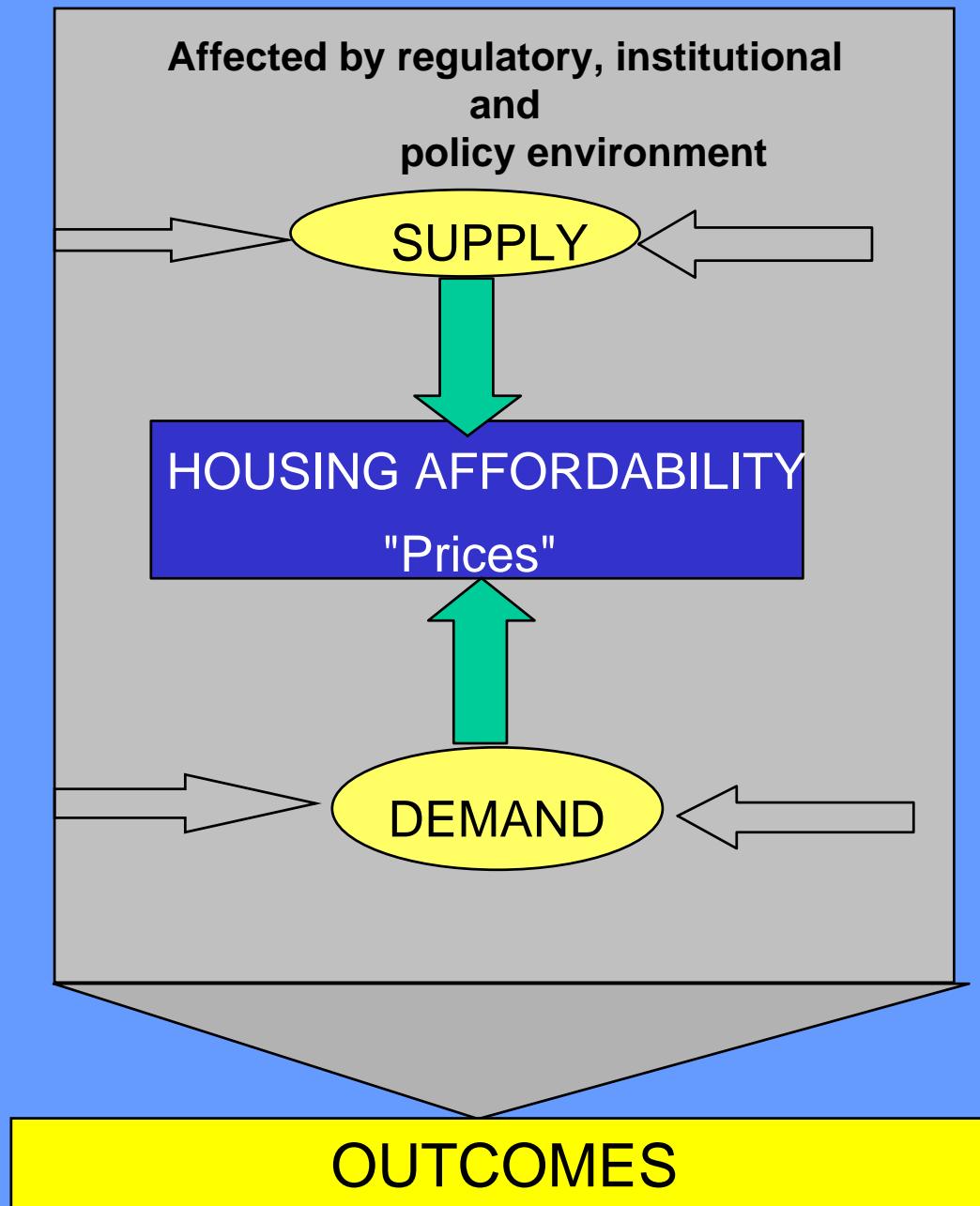
Costs for some and benefits for others

# SOME POINTS OF DEPARTURE

(Steinemann et al, 2005)

- 1. Public sector decision makers often need to consider multiple societal goals, not only profit maximisation...**
- 2. also the impacts of their decisions on both private and public sector, not only their own agency...**
- 3. need to assess various types of benefits and costs, not only those placed in monetary terms.**

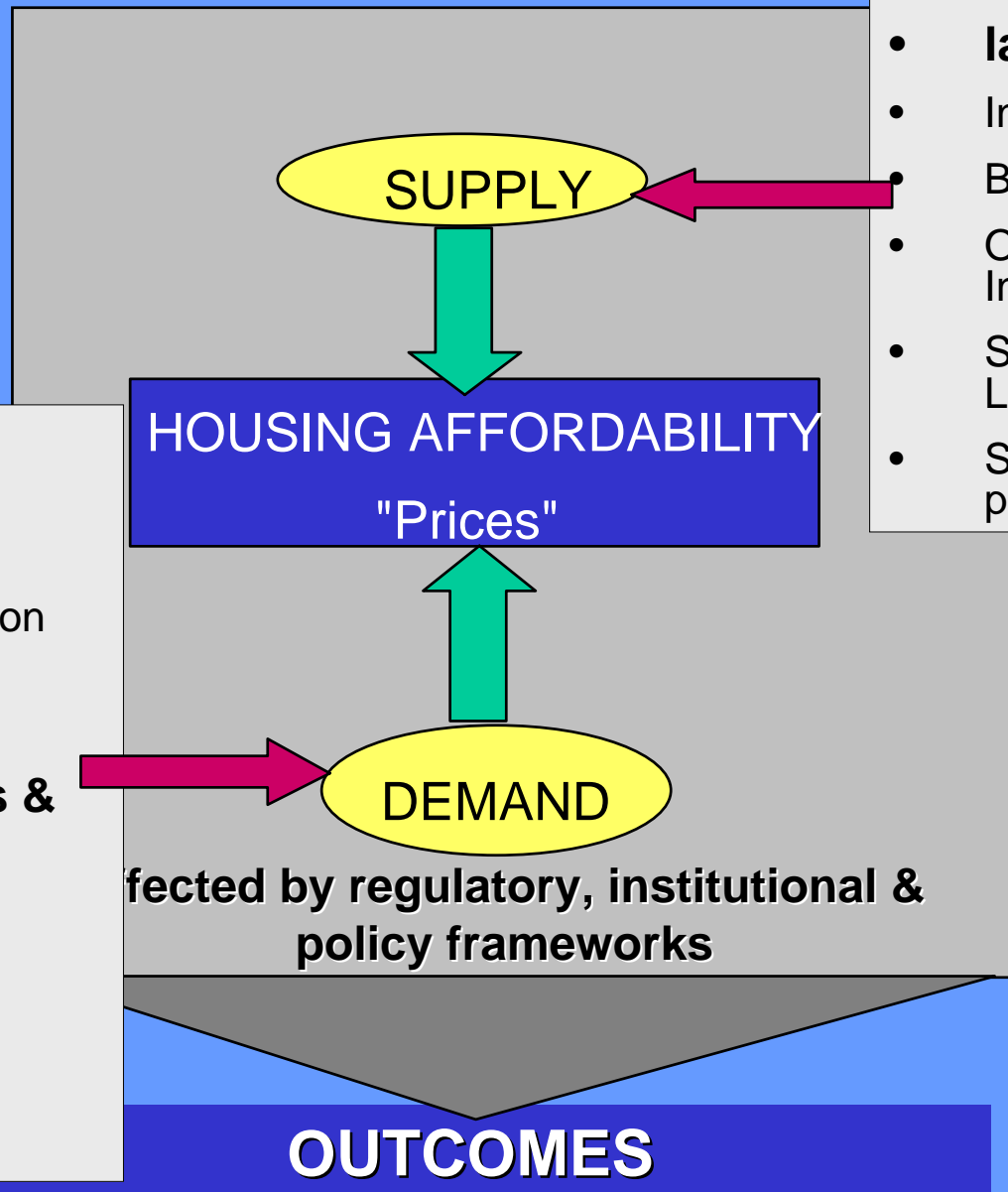




# The Context of Housing Policy

- Affected by availability of:
- **land**
  - Infrastructure
  - Building Materials - BM
  - Organisation Building Industry
  - Skilled & Productive Labour
  - Self-reliance BM production

- Affected by:
- Demographic conditions
  - Rate of urbanisation
  - New household formation
  - **Property rights & legal basis**
  - Housing Finance
  - Fiscal Policies
  - Subsidies
  - Macro-economic conditions





# 2.

## Principles of Supply & Demand

# Supply and Demand

Consumer Preferences



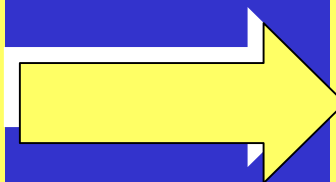
Consumer  
demand for  
commodities

Business Cost



Supply of  
commodities

Changes in  
Supply and  
Demand



Changes in  
Output and  
Prices

# Common Sense

# 1

The HIGHER the price of a good or commodity the LESS consumers are willing to buy provided that other things remain constant.



## Other determinants of demand:

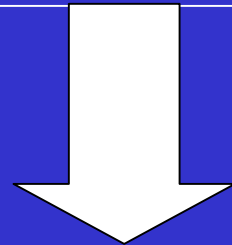
- average levels of income
- size of population - size of the market
- price & availability of related products - tend to perform the same function
- tastes and preferences - cultural + historical influences
- special influences

# Common Sense

2

20

Relation between PRICE of a good  
and QUANTITY demanded



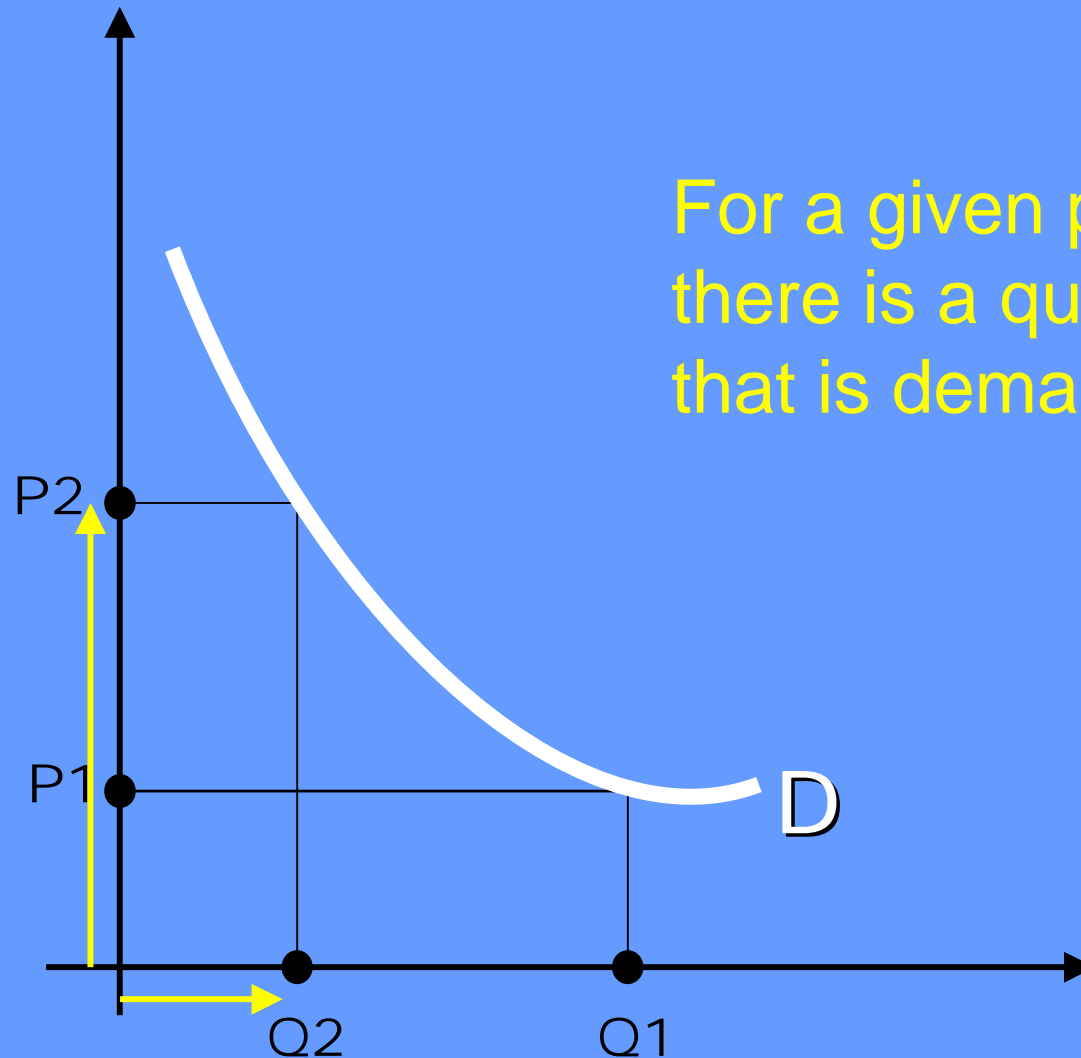
Relationship PRICE - QUANTITY PURCHASED

P — Q

Inversely Related

# The DEMAND Curve

Price



For a given price  $P_2$   
there is a quantity  $Q_2$   
that is demanded.

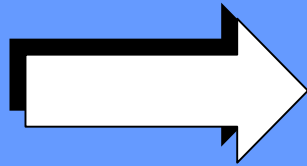
Quantity

# What does influence Demand? <sup>22</sup>

1. Income
2. Size of population - size of the market
3. Price & availability of related products performing same function
4. Tastes and preferences - cultural + historical influences
5. Special influences: (hot climate-airco)



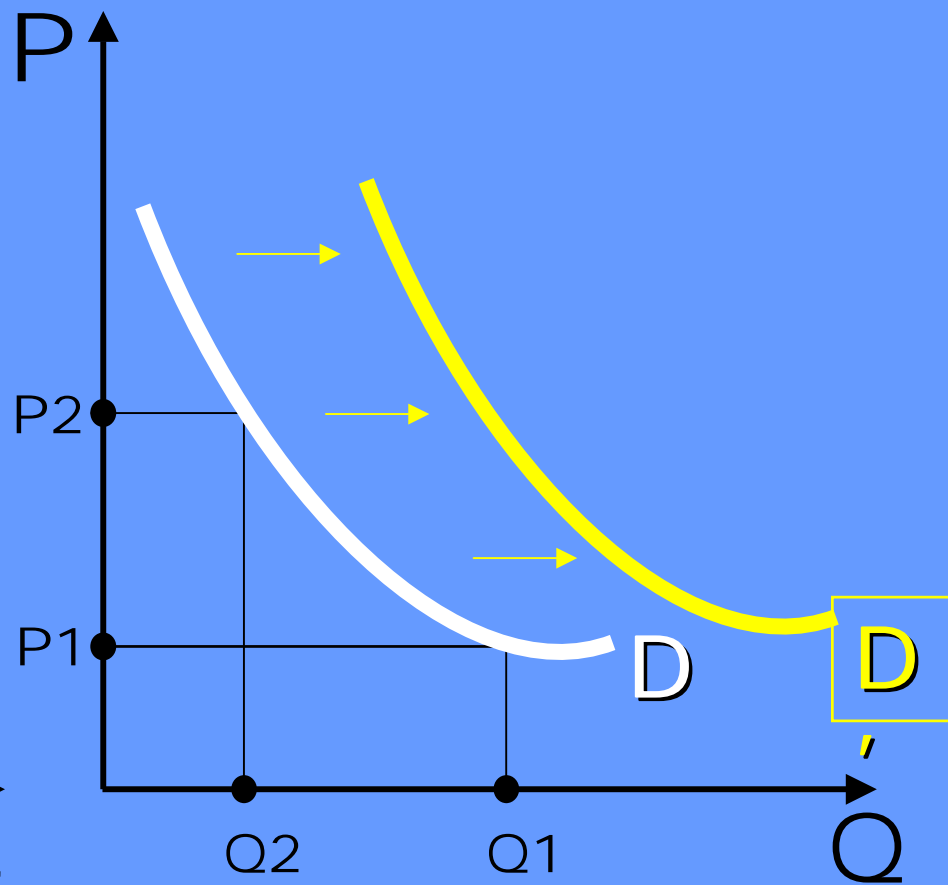
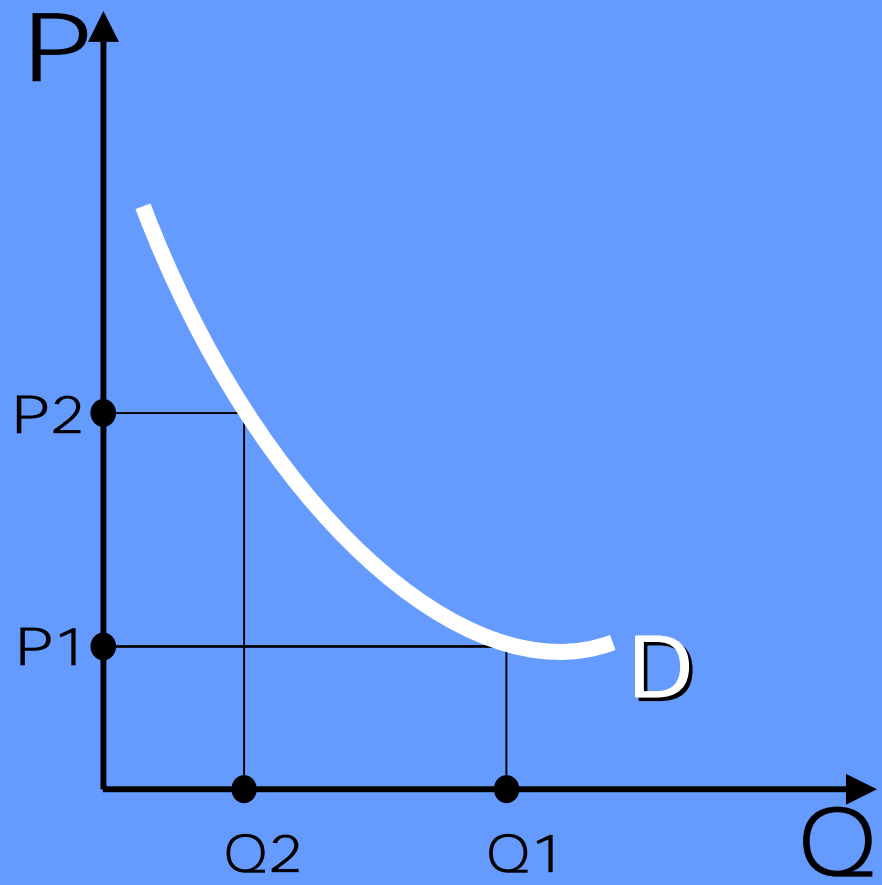
# Change in Demand



# Demand curve shifts

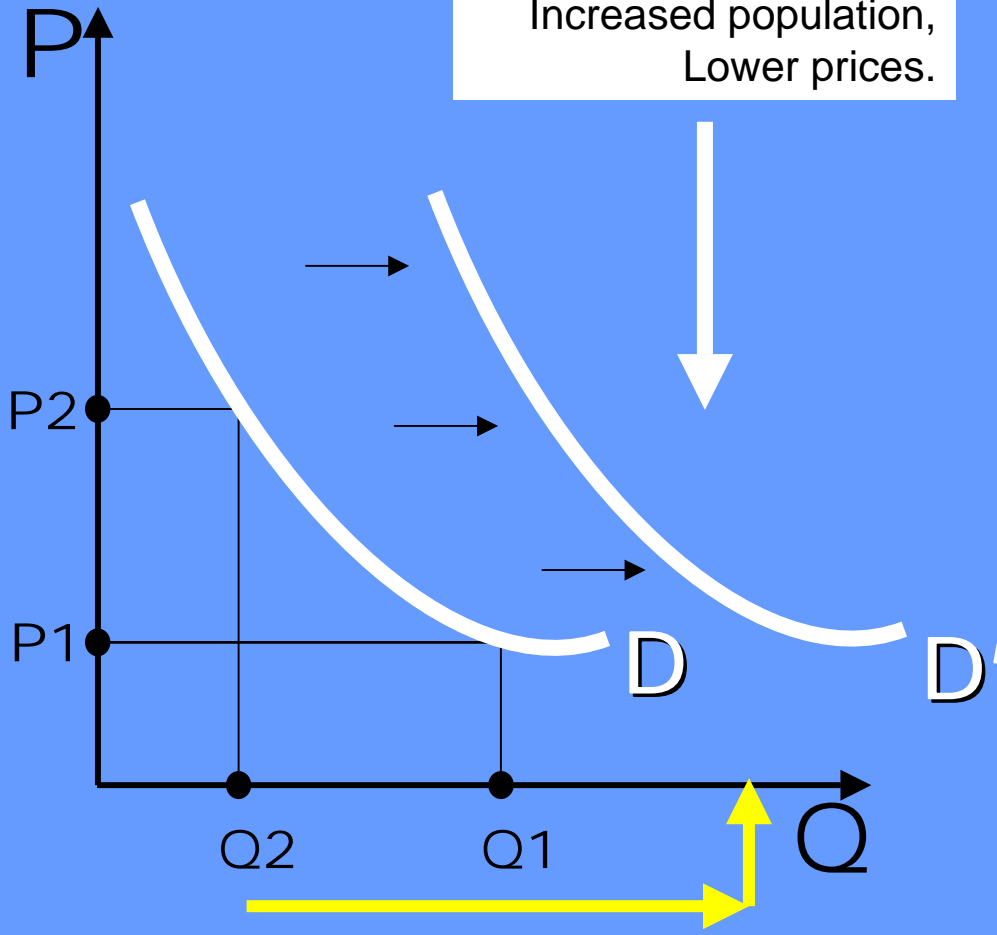
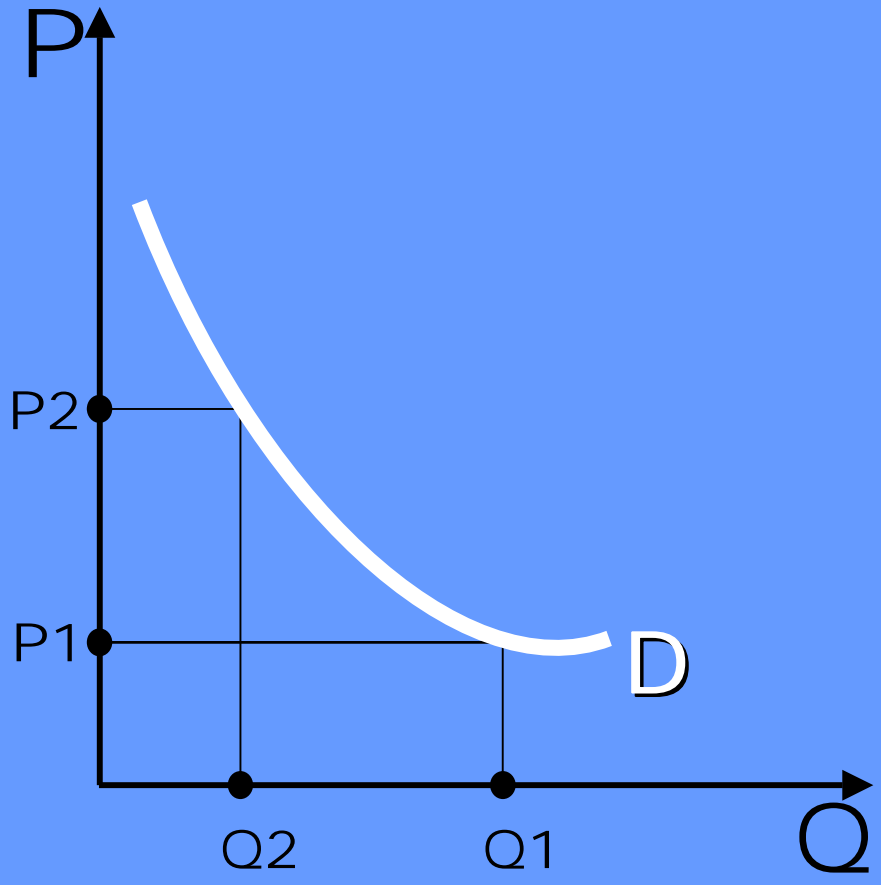
Influences change rather than the good's price.

For example, what happens if population increases?



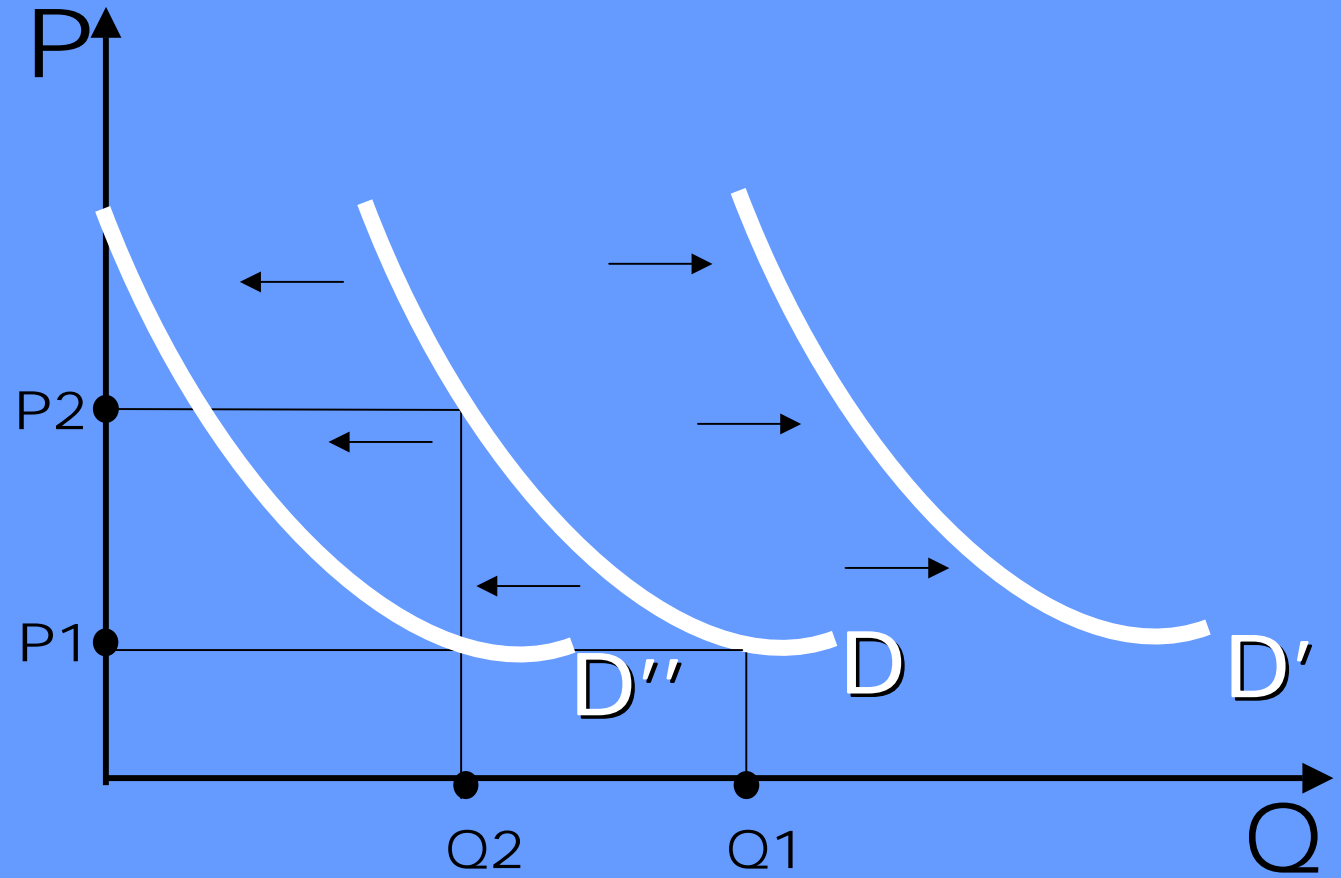
# What happens if there is a rise in average income ?

**POSSIBLE CAUSES:**  
Rising average income,  
Increased population,  
Lower prices.

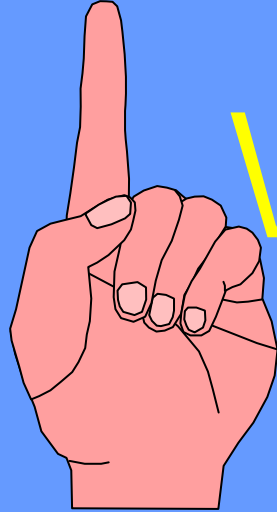




# What happens if there is a decrease in average income ?

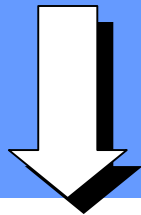


This is called the shift in DEMAND!



# WARNING!

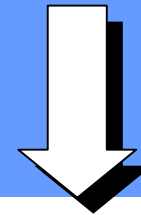
Change in DEMAND



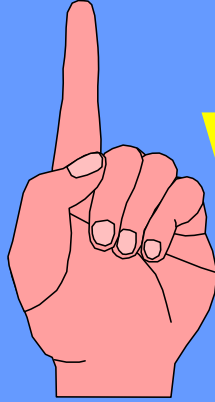
Shift in the DEMAND curve!



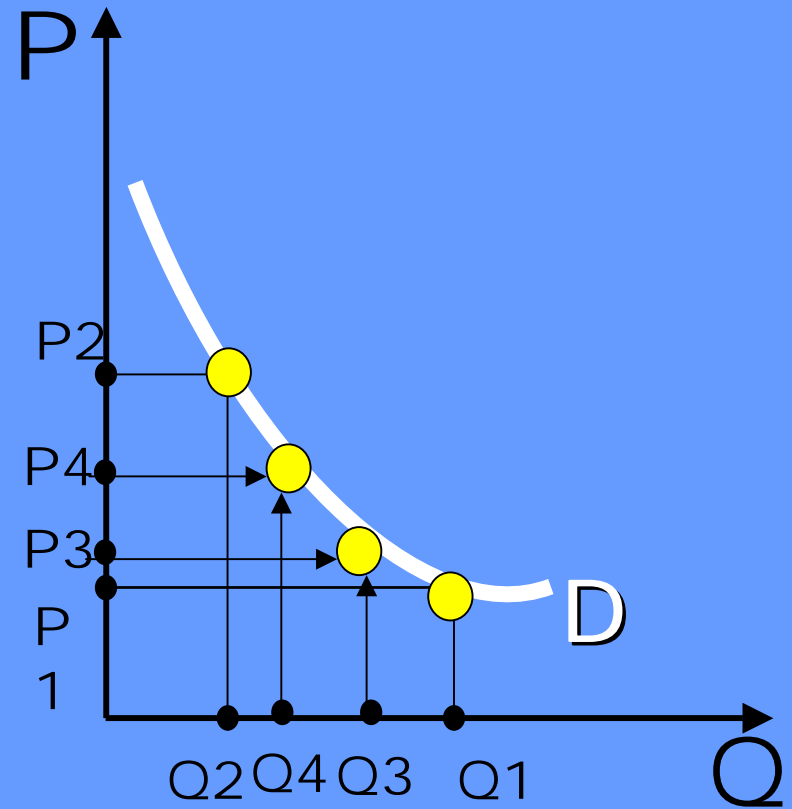
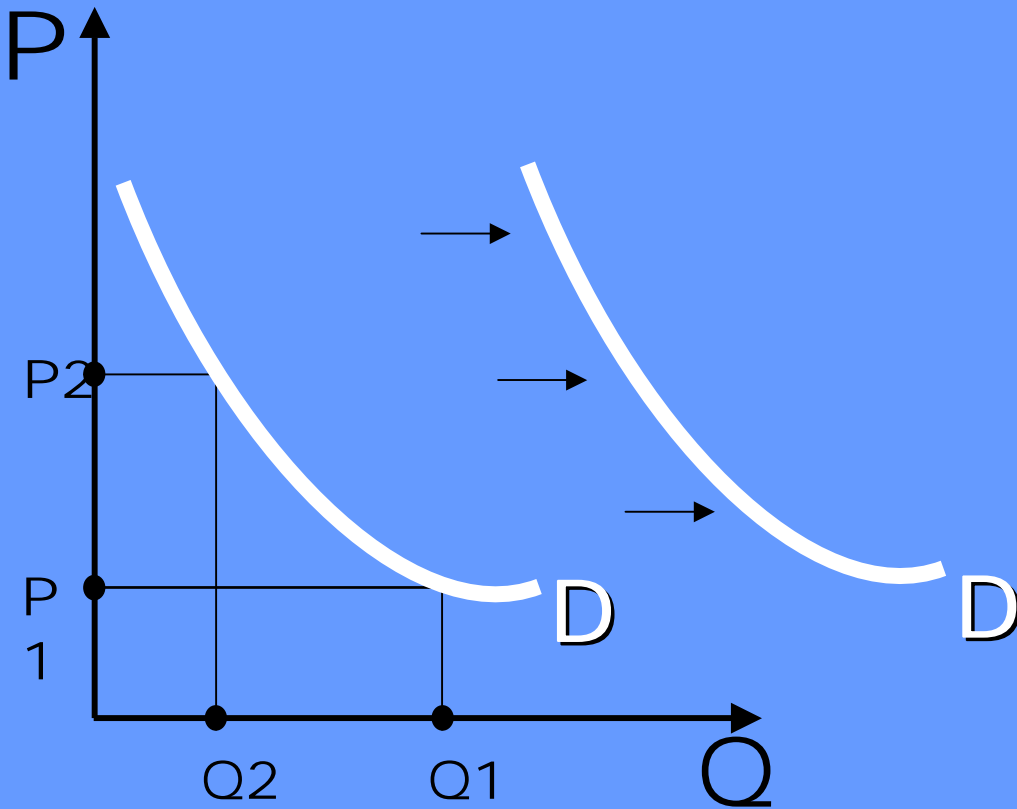
Change in QUANTITY demanded



Moving to a different point in the DEMAND curve after a PRICE change!(movement along)

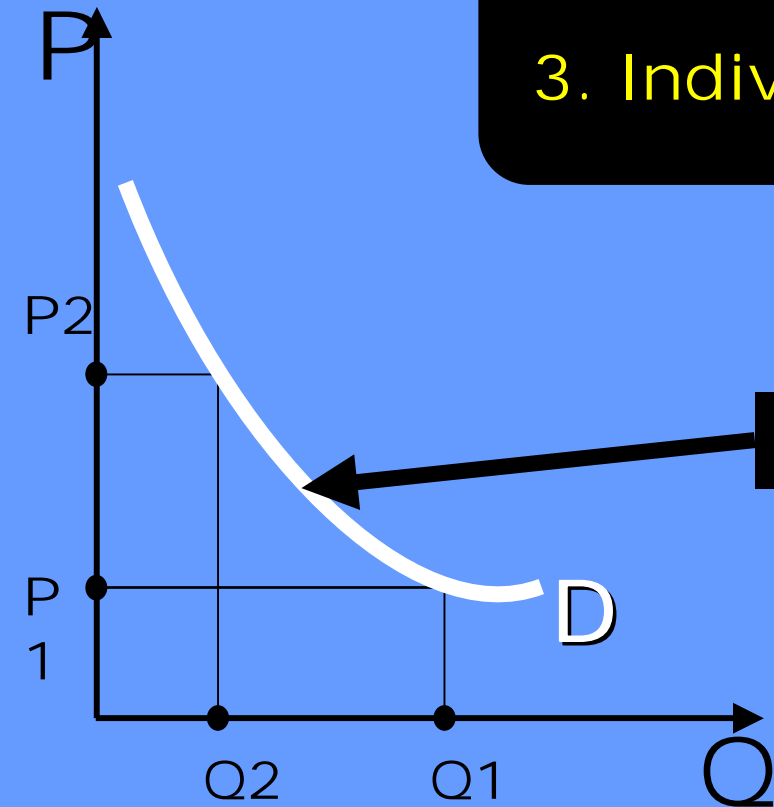
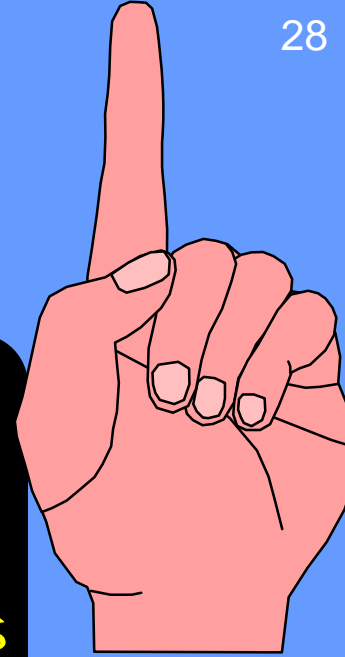


# WARNING!



# WARNING !


1. Substitution effect
2. Income effect
3. Individual needs and tastes



market demand

# The SUPPLY Curve

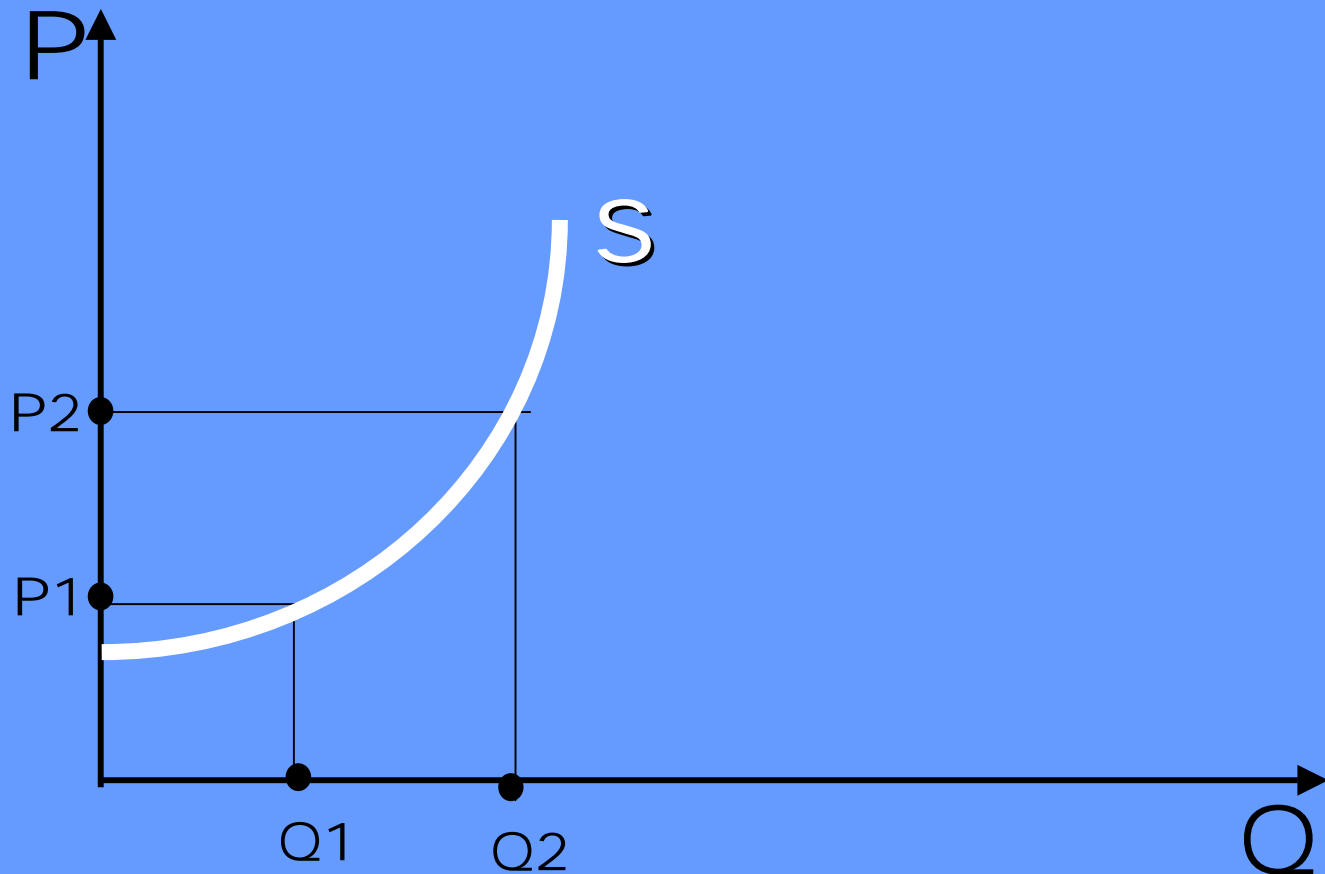
Relates the QUANTITY supplied of a good/commodity to its market PRICE - other things remain constant.



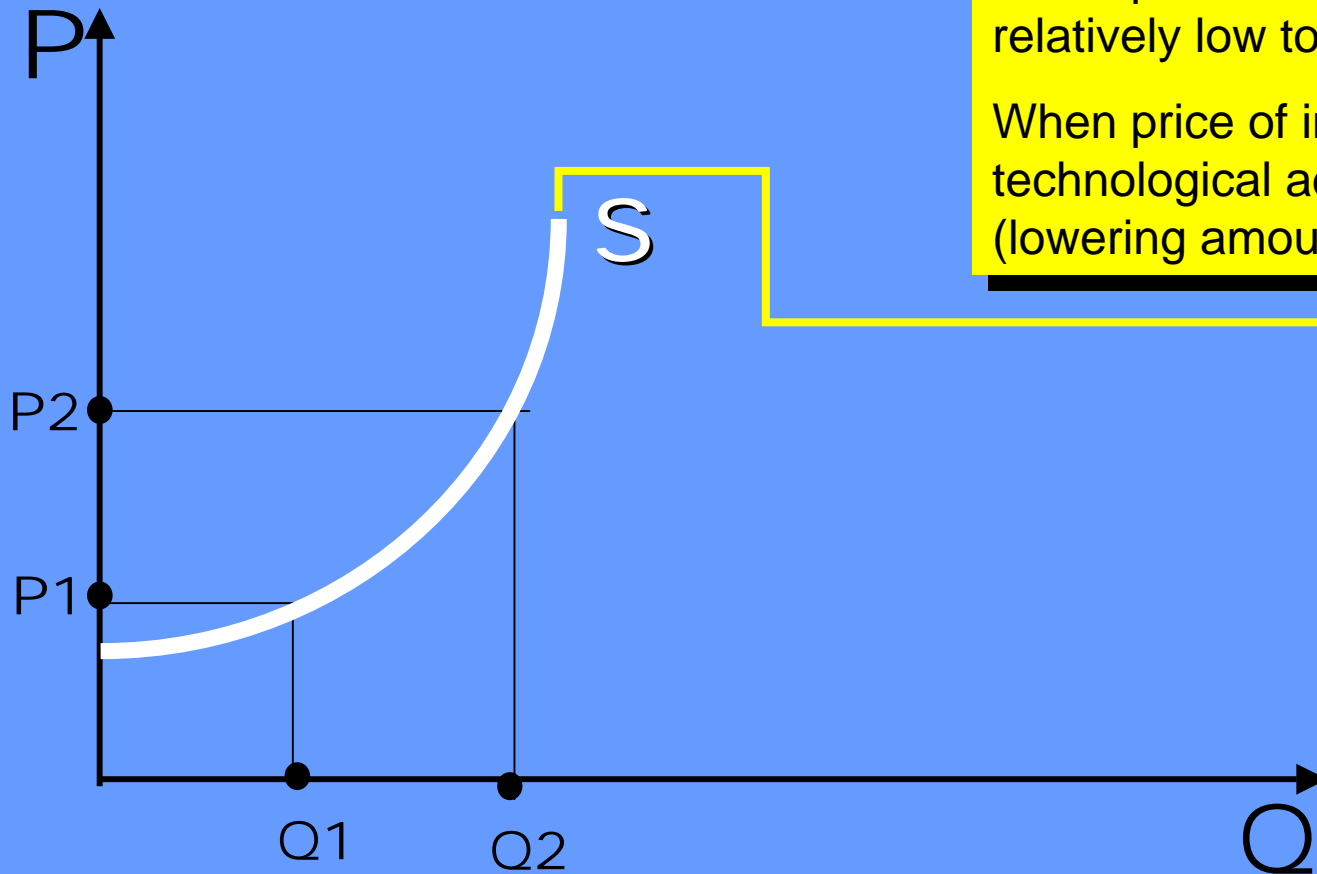
Cost of production  
Prices of related goods  
Government policies!

# The SUPPLY Curve

Relationship between its market PRICE and the QUANTITY/amount of that commodity that producers are willing to produce and sell  
- other things remain constant



# What are the elements underlying the SUPPLY CURVE ?



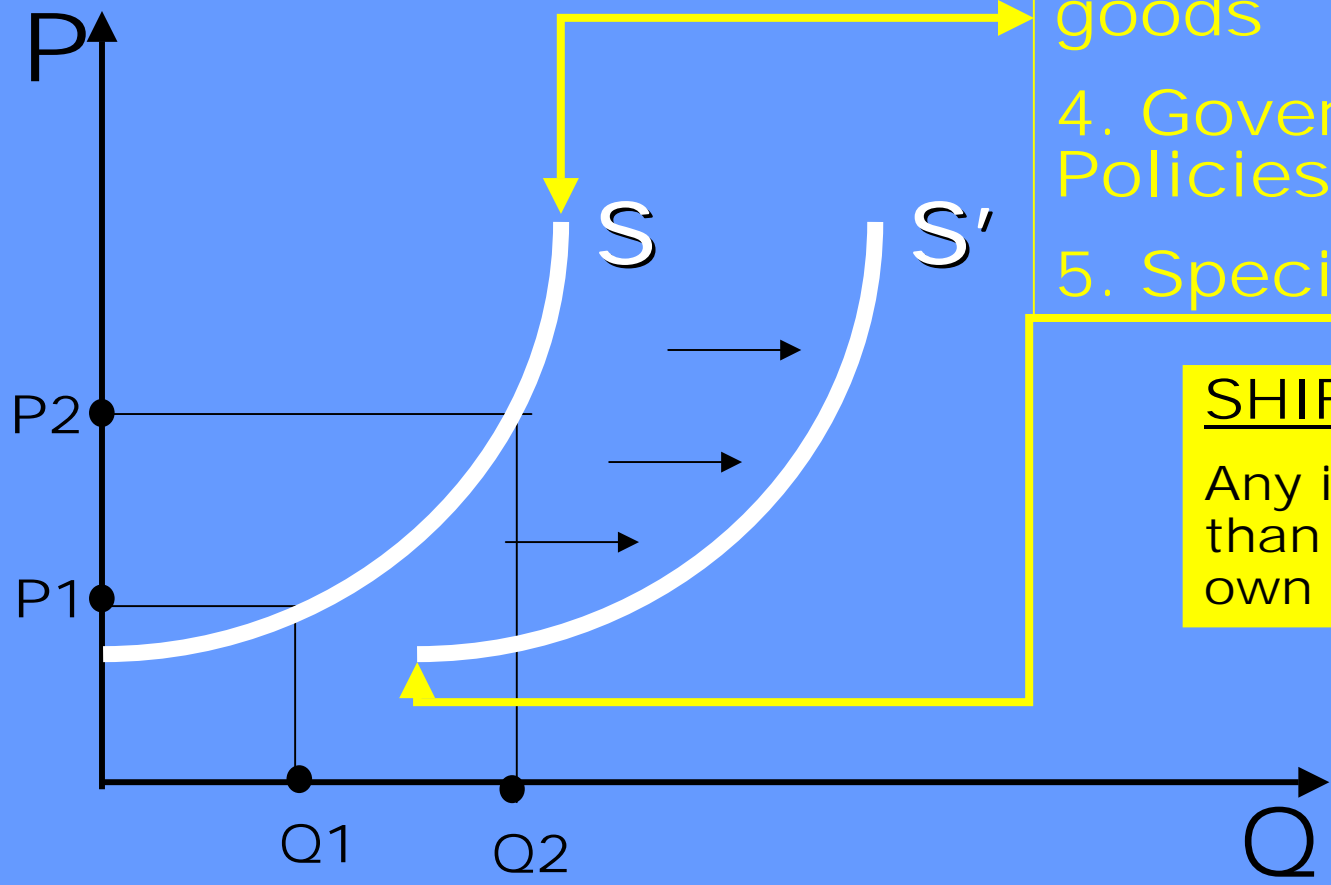
## Costs of Production:

When production costs are relatively low to the market price.

When price of inputs and technological advances are low (lowering amounts of inputs).

# What are the factors affecting SUPPLY ?

- 1. Technology
- 2. Input prices
- 3. Prices related goods
- 4. Government Policies
- 5. Special influences



**SHIFTS IN SUPPLY !**  
Any influences rather than commodity/good's own price change!

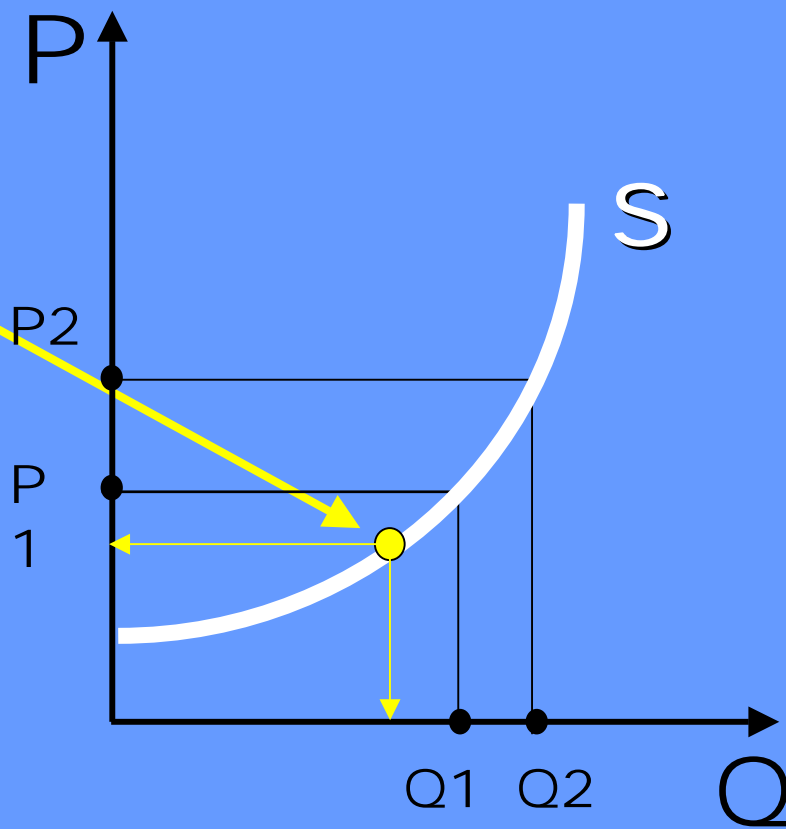
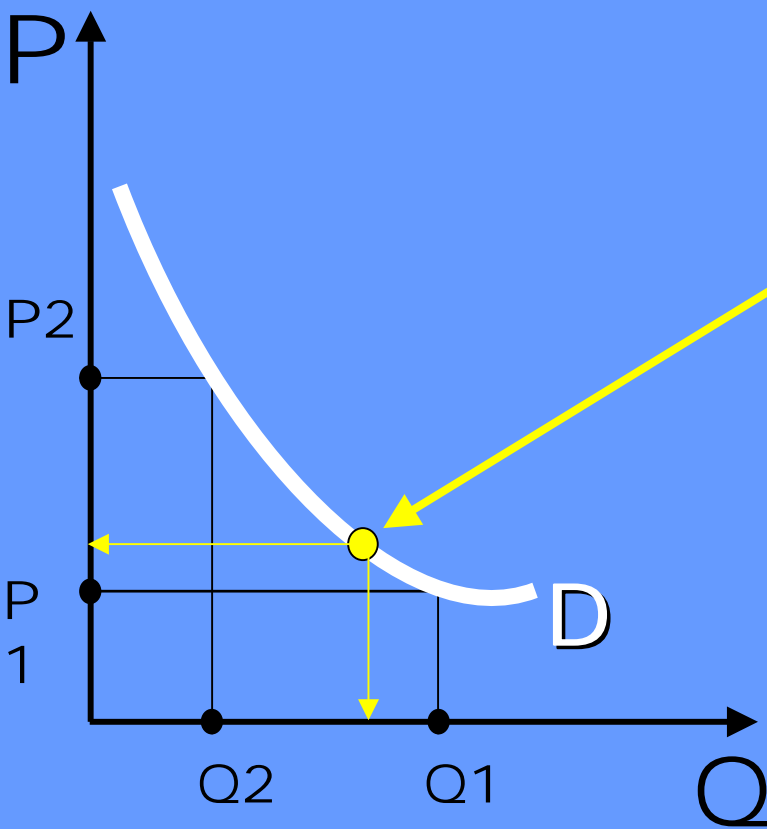


# PART 2

# Housing Markets

# The Market Equilibrium

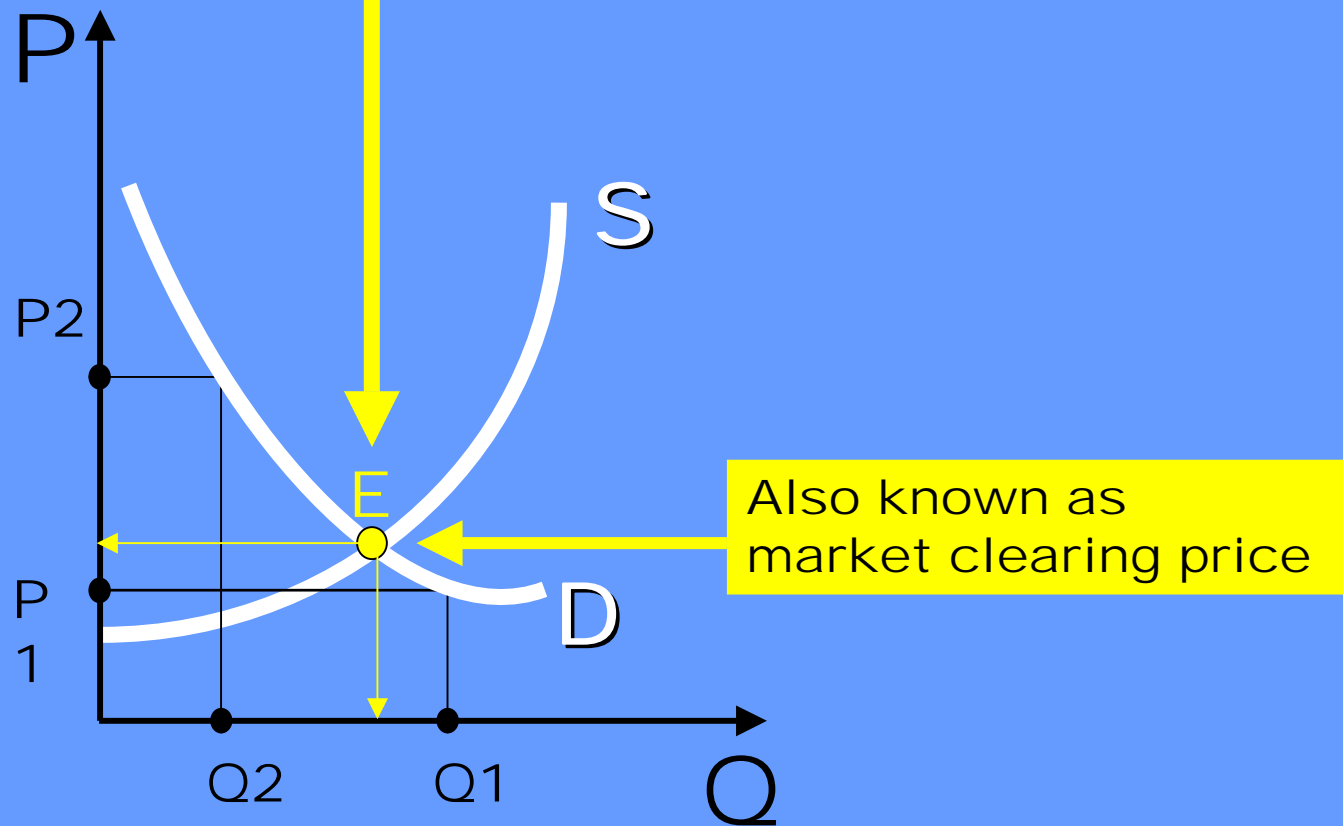
The amount that BUYERS want to buy is just equal to the amount that SELLERS want to sell.



# The Market

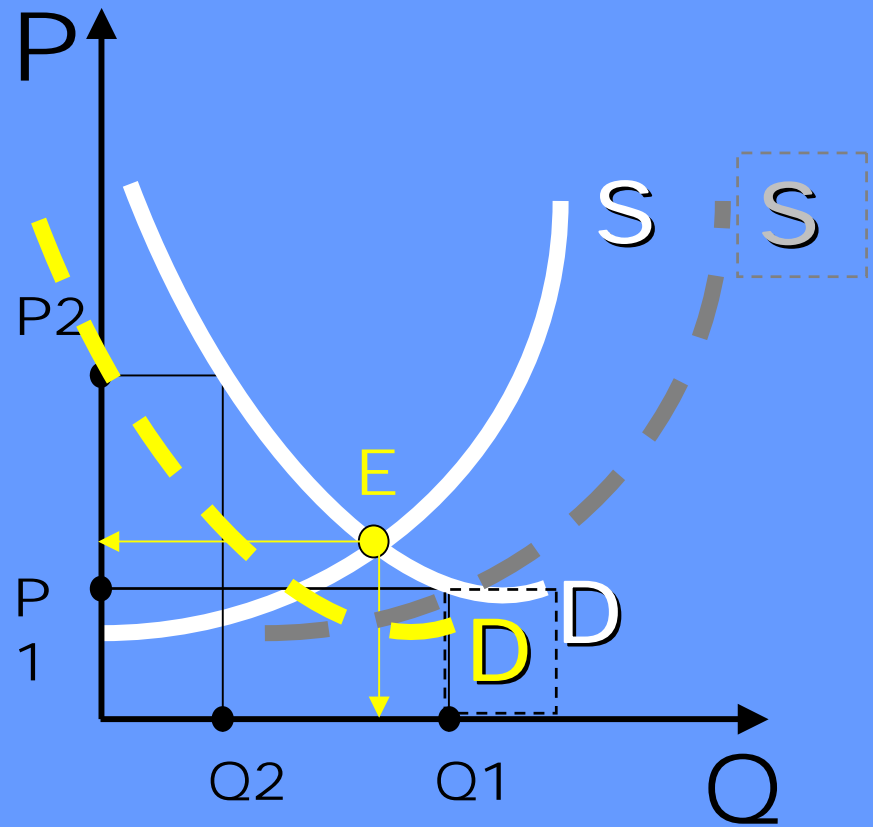
**EQUILIBRIUM:** There is no reason for price to rise or fall as long as other things remain unchanged.

At a price at which QUANTITY demanded = QUANTITY supplied



# The Market Equilibrium

When the elements underlying Demand and Supply change, this leads to shifts in demand or supply and changes in the market EQUILIBRIUM of Prices and Quantity.

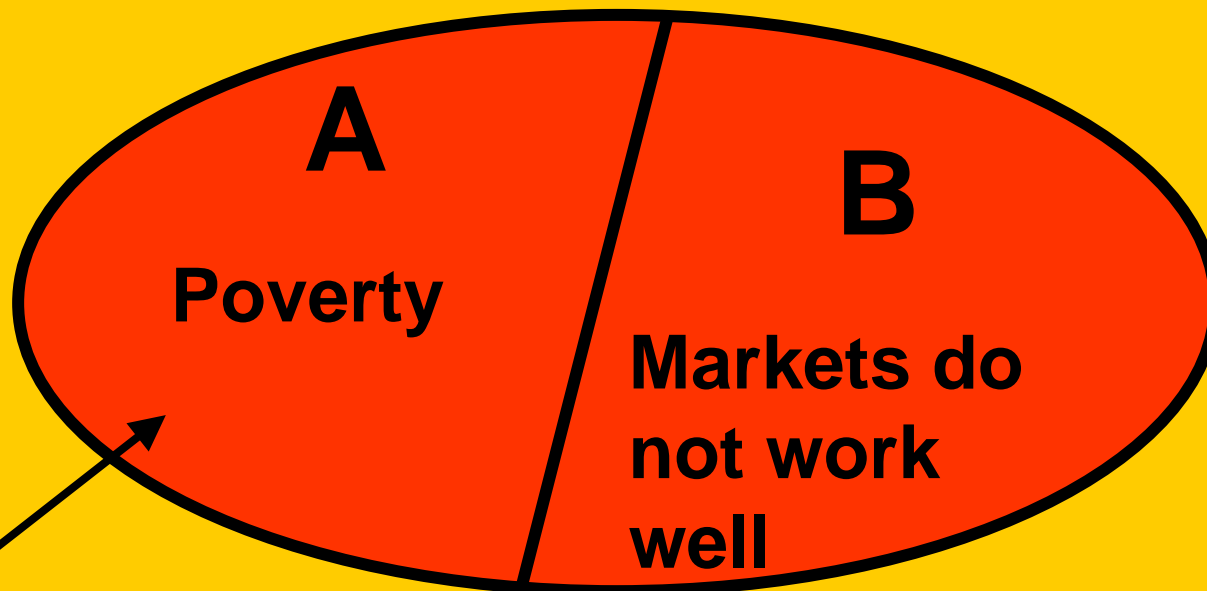


# 3.

**Supply & Demand:  
what happens if?**

# Enabling Housing Markets to Work: How to translate that into a strategy?

Those who advocate this,  
divide de **Housing  
Problem** in 2 Parts.



Can only be solved with  
subsidies.

# Markets

- Buy & Selling
- People

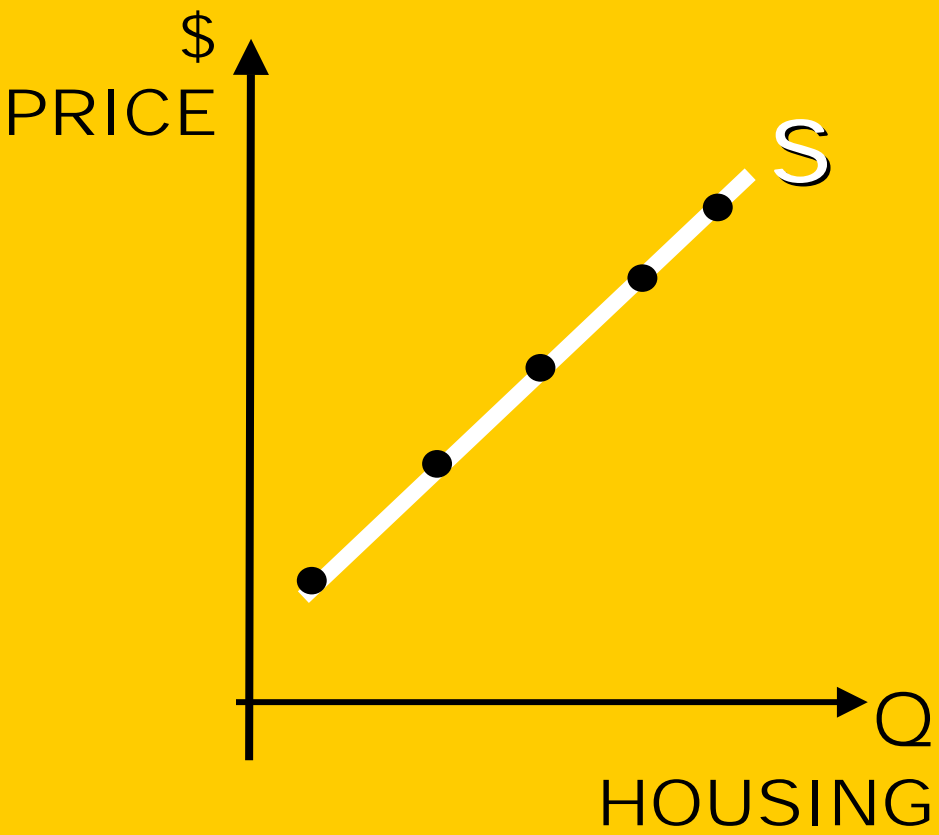
## Sellers:

people who sell

If you offer me zero I sell you nothing.

If price is low, those who sell tend Not to sell much:

### SUPPLY

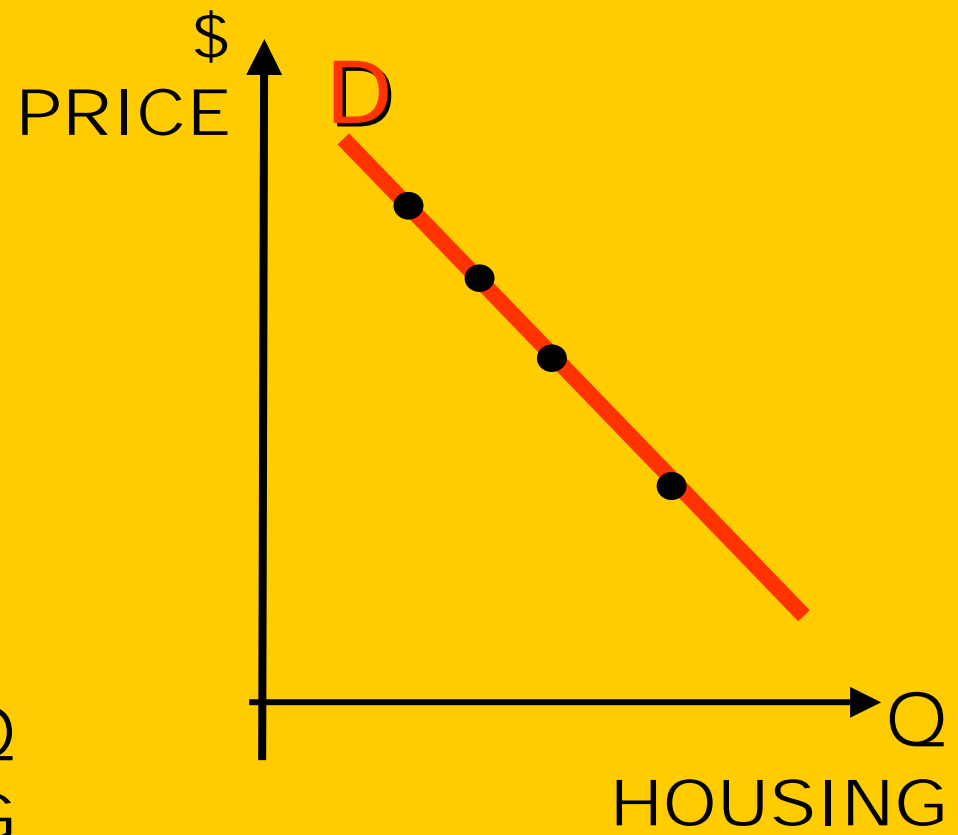


## Buyers:

people who consume

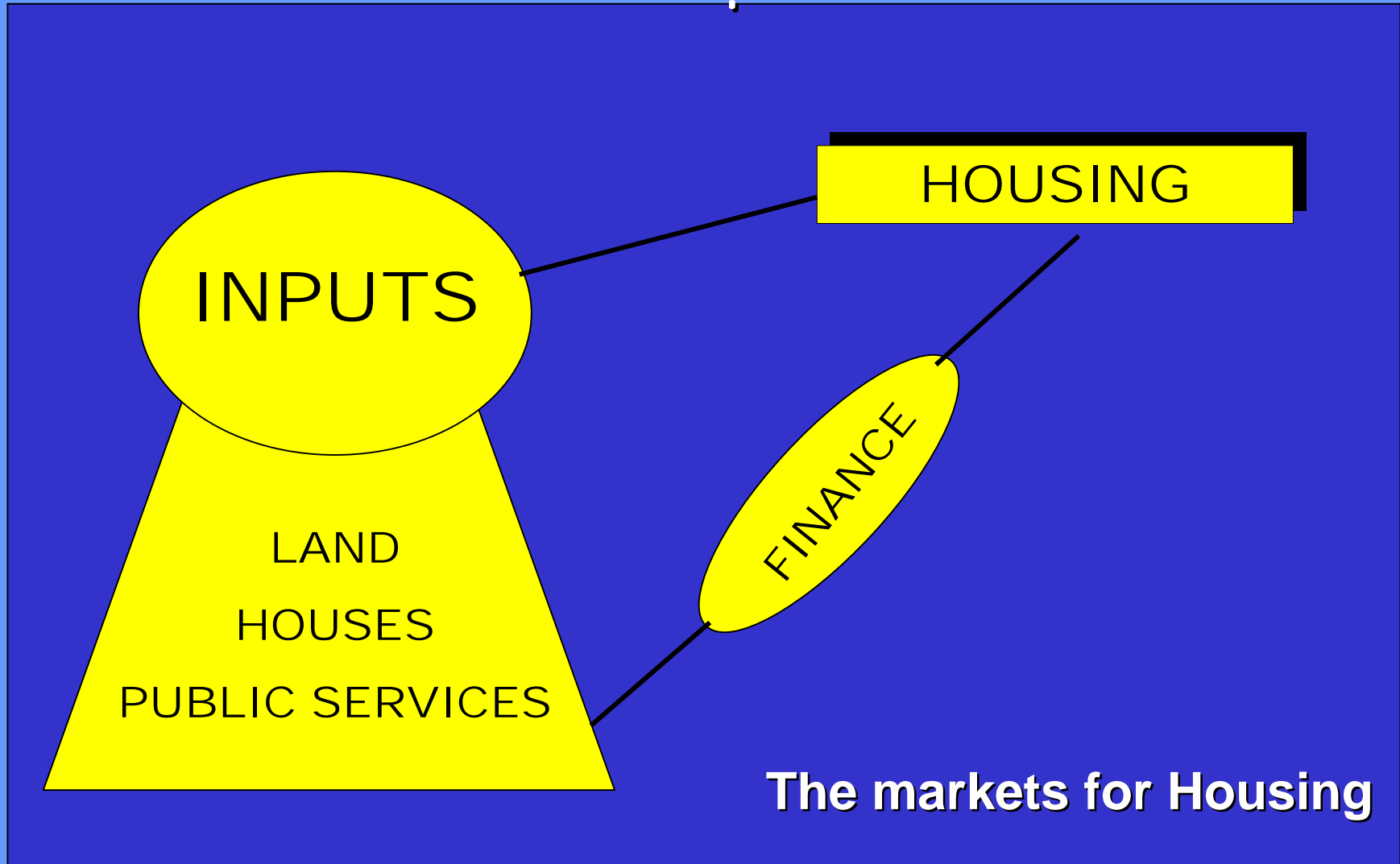
If price is low, the buyers will tend to buy a lot.

If price is high, buyers tend Not to buy a lot: DEMAND



# How ECONOMISTS look at housing

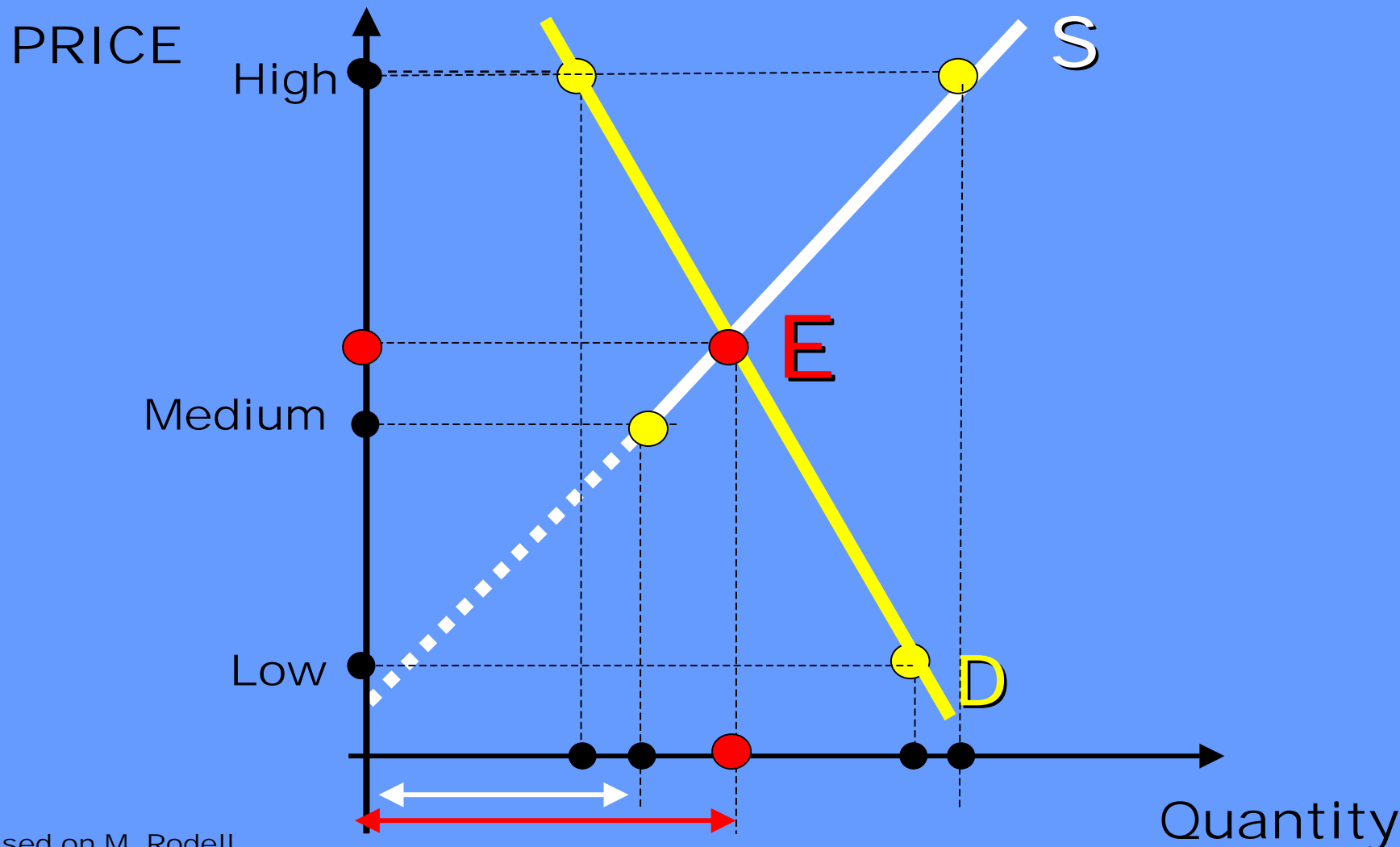
?





# How ECONOMISTS look at housing ?<sup>41</sup>

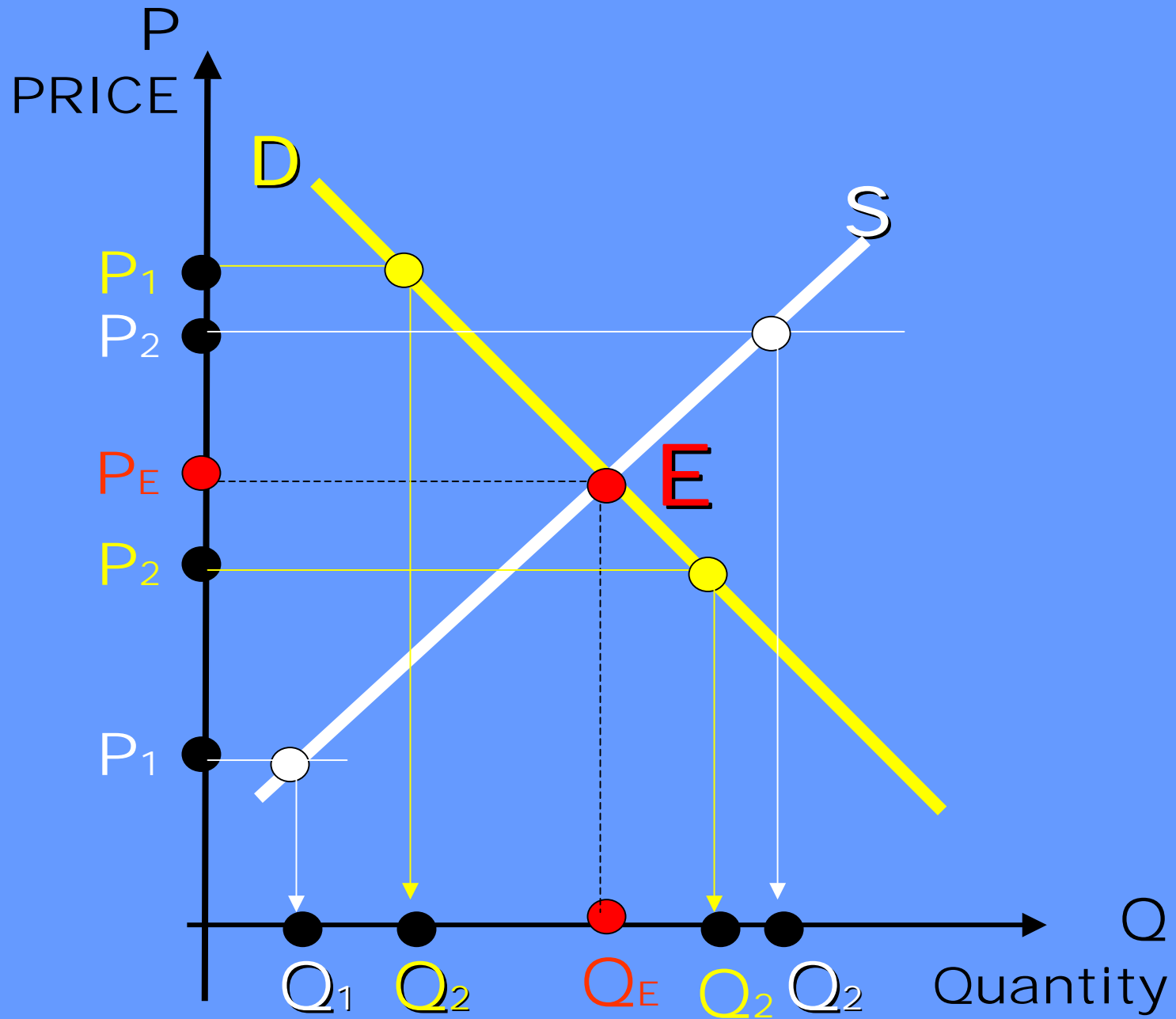
HOUSING = use of a house + associated services for a specific period of time

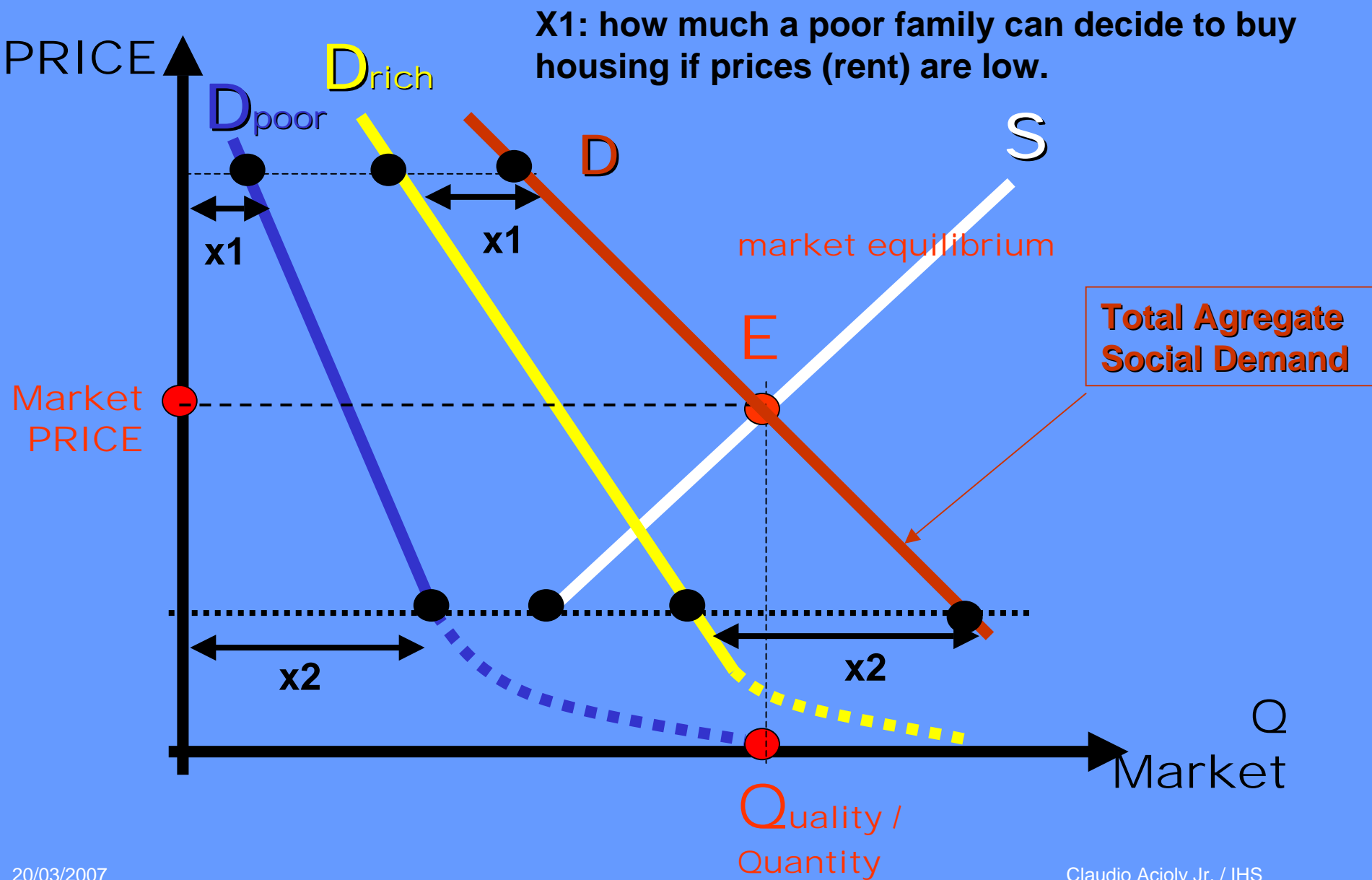


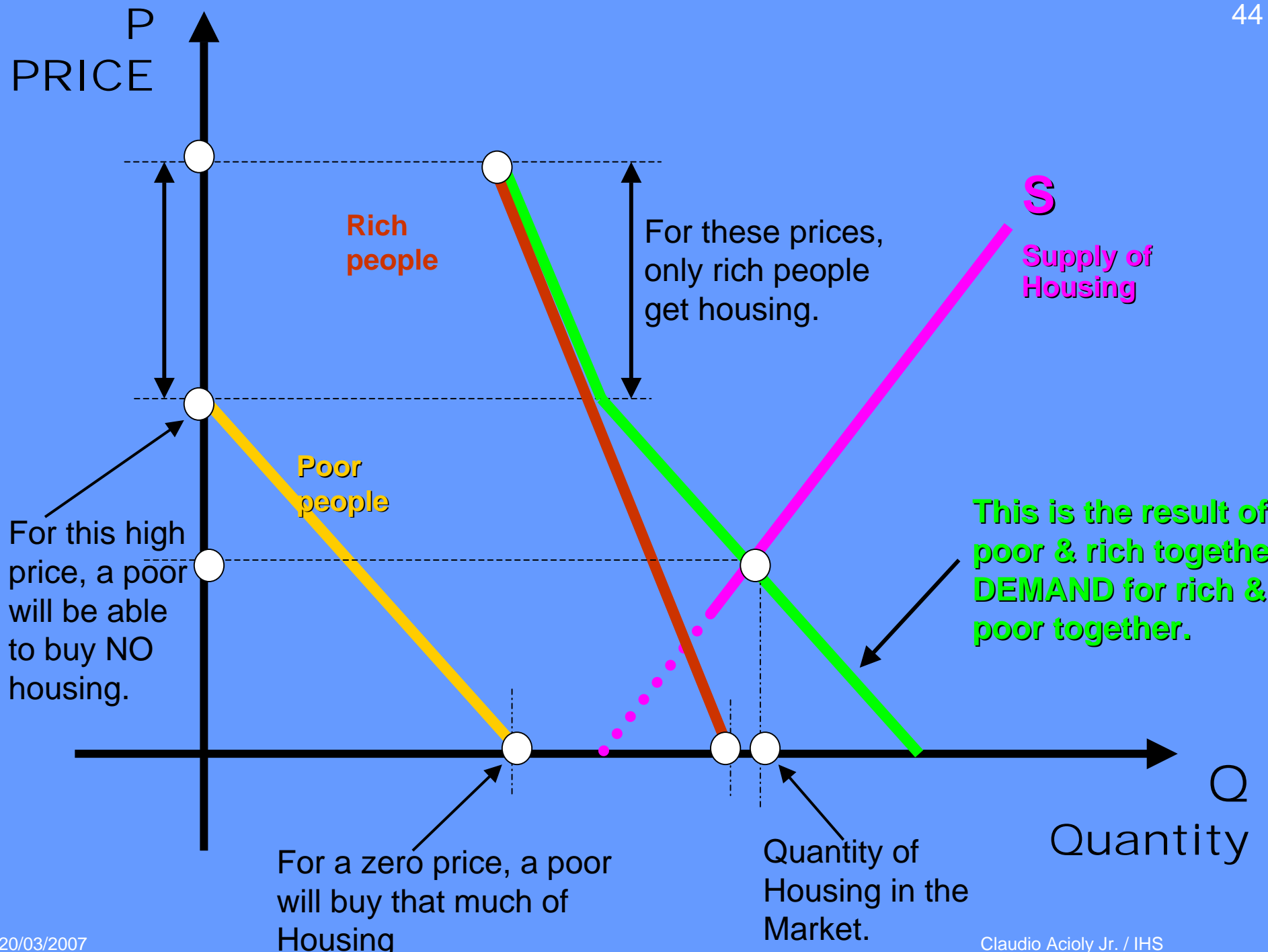
Based on M. Rodell

20/03/2007

Claudio Acioly Jr. / IHS







# 4.

**SHIFTS in HOUSING SUPPLY**

**&**

**HOUSING DEMAND**

**Situation:** you want to buy housing  
and then PRICE of housing has doubled !!!

WHAT DOES IT MEAN?

The demand  
for housing has  
increased?

OR

The production  
cost has risen?

Could be both ! Or either one !  
**WE NEED MORE INFORMATION**

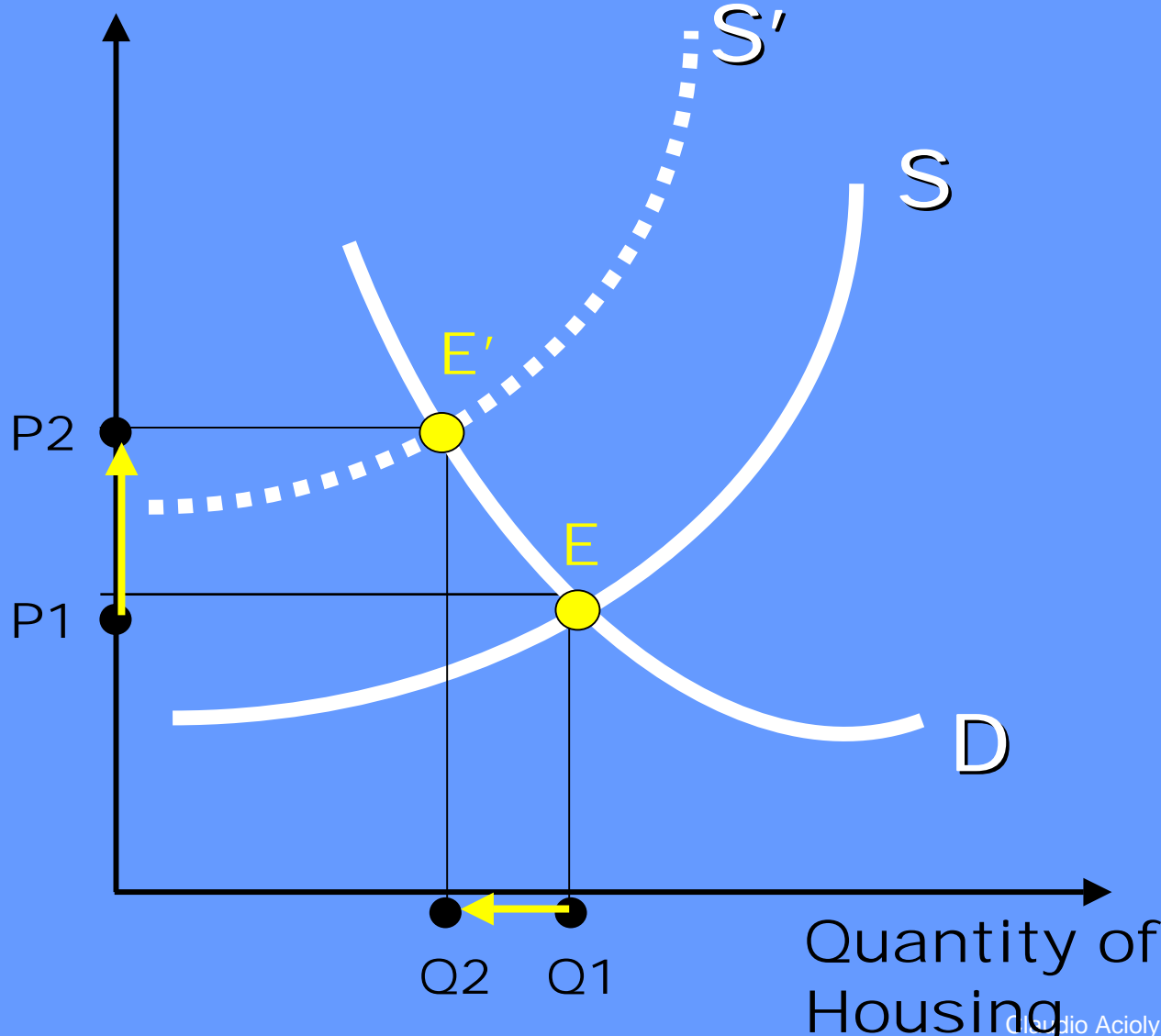
!

ECONOMISTS: when PRICES or QUANTITIES  
change in market, does the situation reflect  
change on the SUPPLY side or the DEMAND  
side?

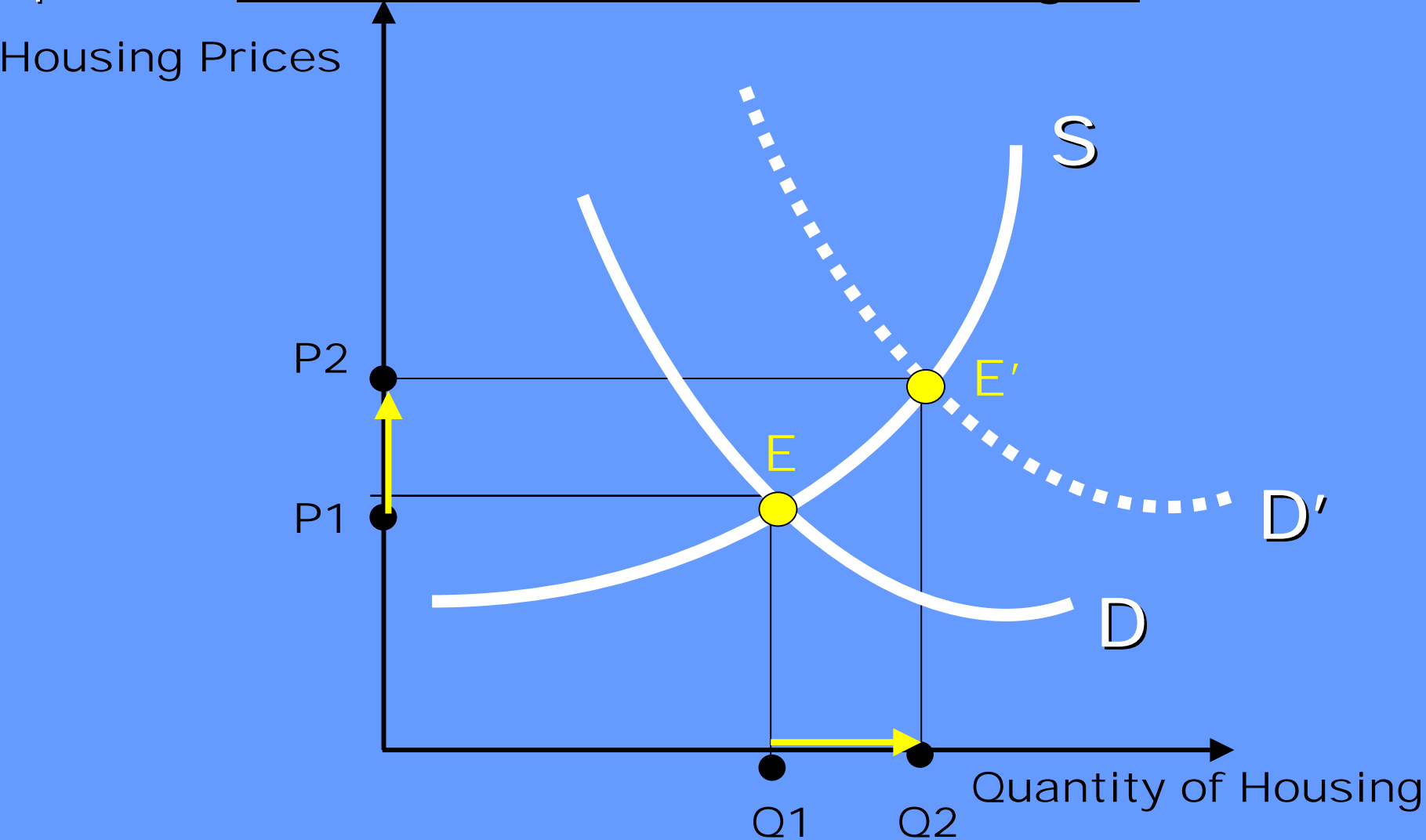
# Situation 1: if Housing SUPPLY decreases

Housing PRICES increases accompanied by decrease in QUANTITY of Housing = Supply curve shifts to the left!

Housing Prices



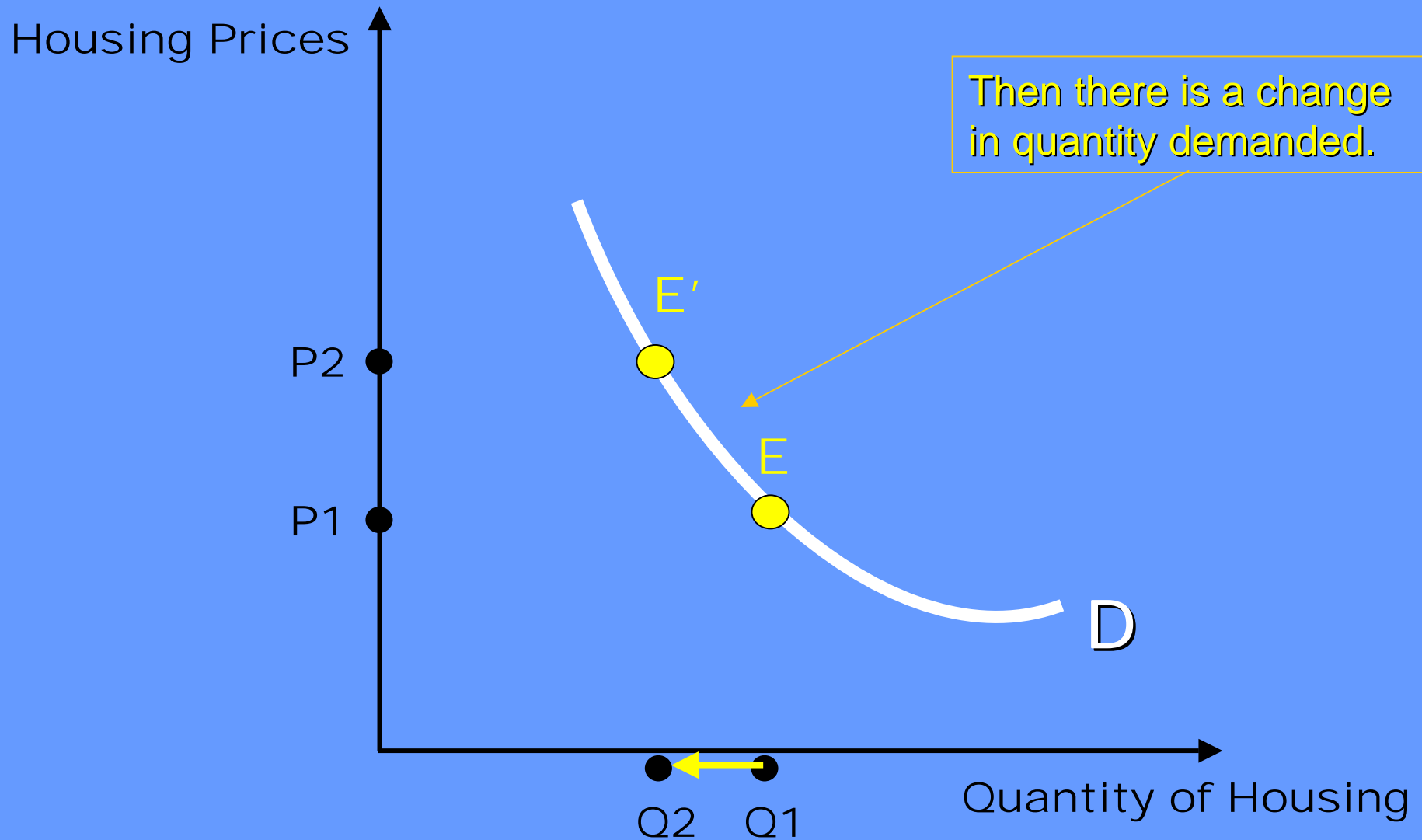
**Situation 2:** a shift in the DEMAND curve leads to excess DEMAND for Housing and PRICES will be bid up as equilibrium PRICE and QUANTITY move upward. Demand curve shifts to the right!





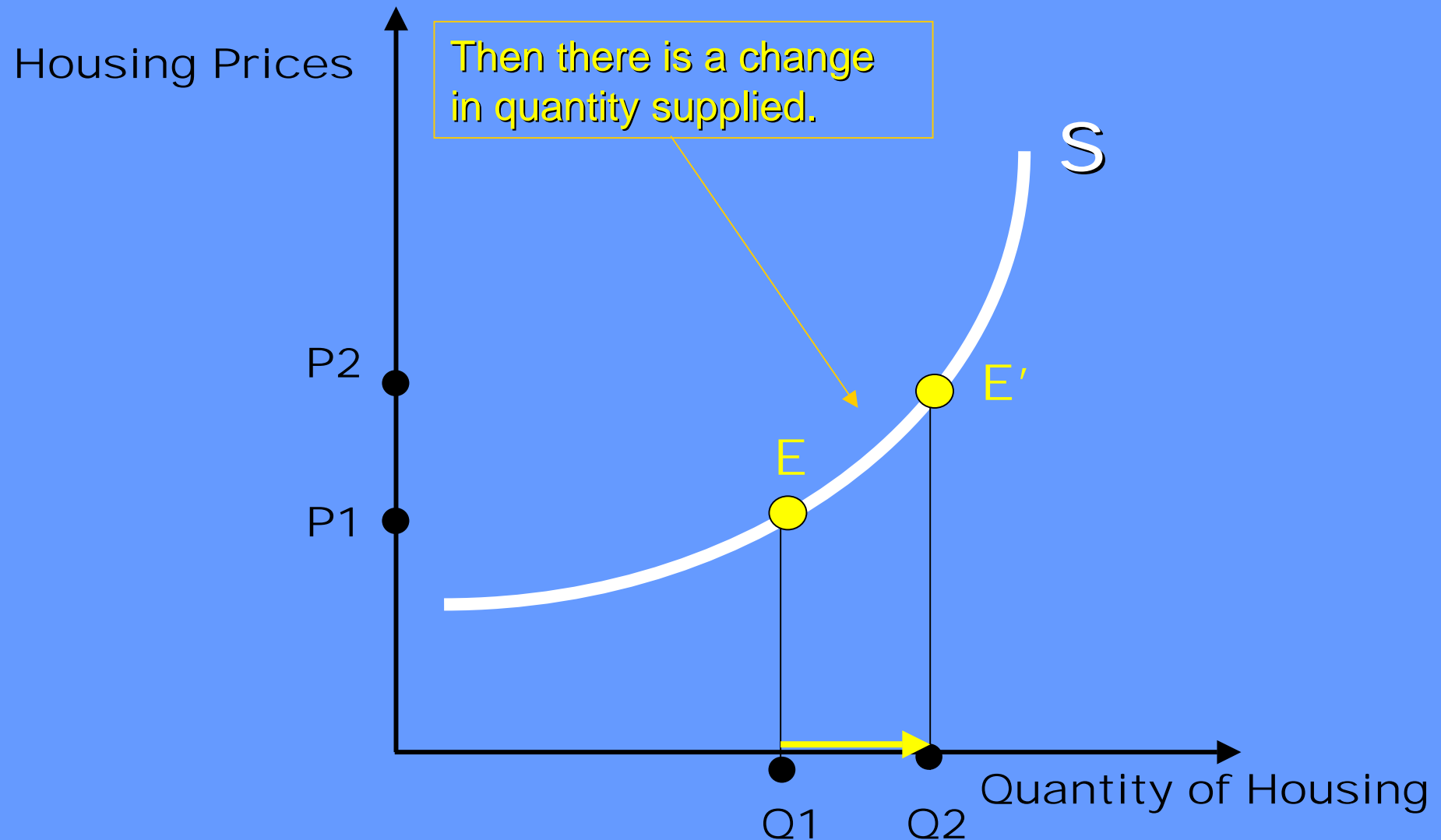
# Situation 1:

What happens if only prices change?



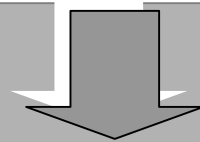
# Situation 2

What happens if only prices change?

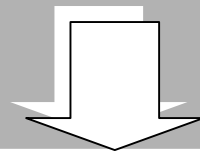


# Practical Example 1

Crisis in the cement industry causes LESS cement production and high prices of cement per sack.

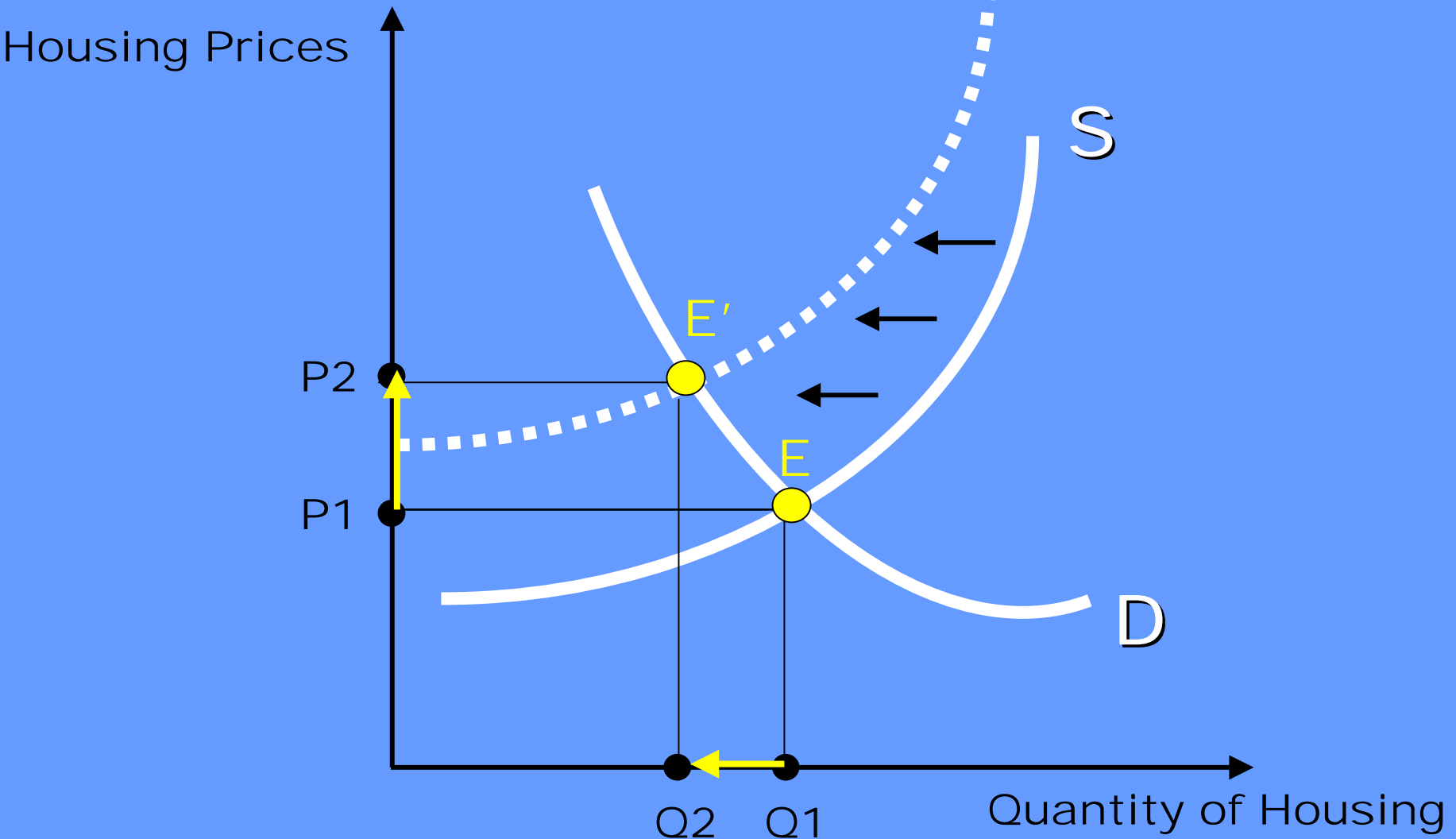


HOUSING developers produce less housing for the old prices.



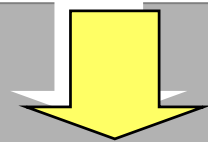
So, quantity of HOUSING that is demanded exceeds quantity of housing that is supplied

CONCLUSION 1: low supply of cement affects housing supply (shift to the left) raises housing prices, lowering quantity of Housing that is demanded.



# Practical Example 2

New building technology has been developed that allows lower housing production costs.

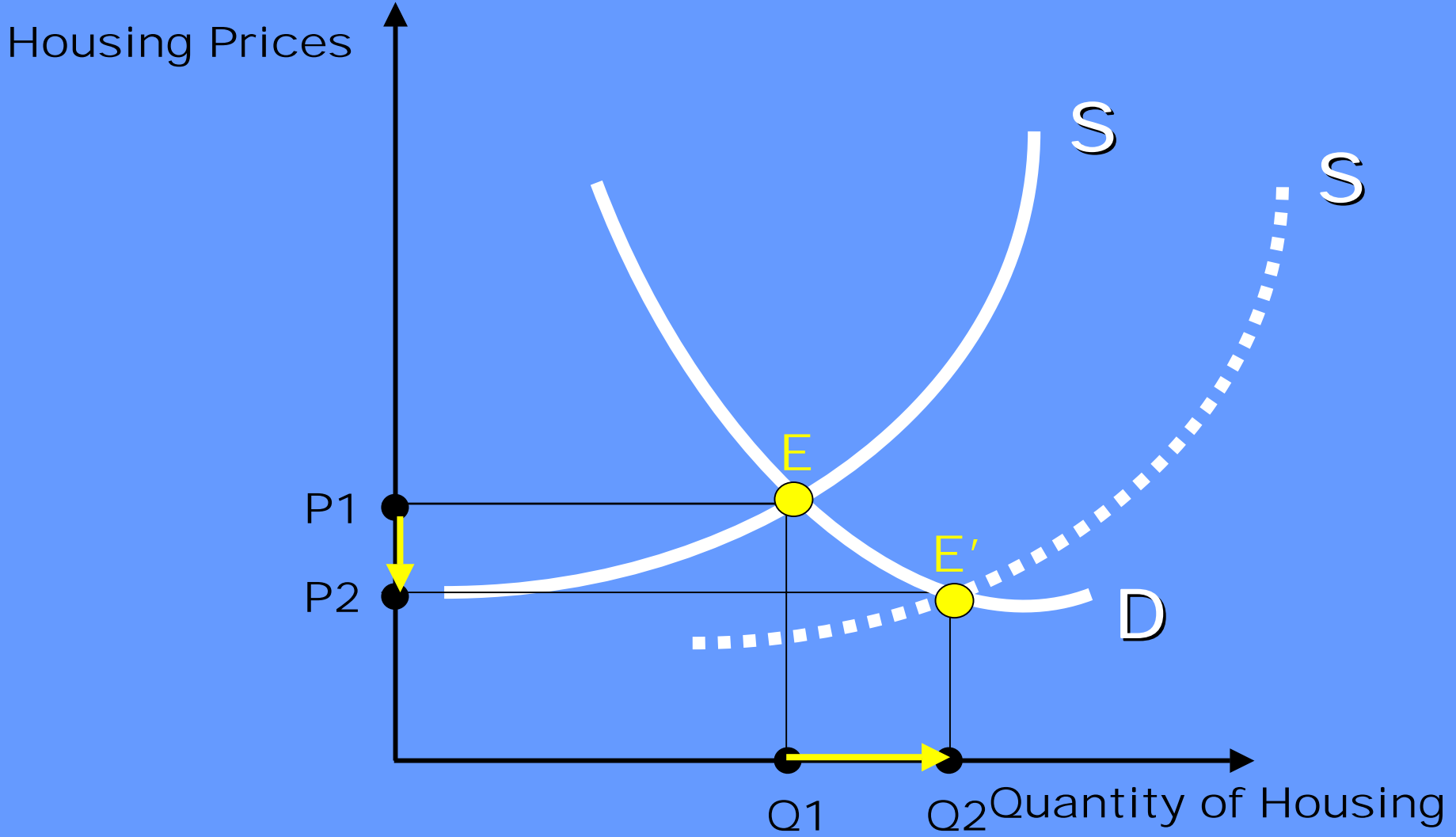


HOUSING developers produce more housing for the old prices.



So, quantity of HOUSING that is supplied exceeds quantity of housing that is demanded for the old prices

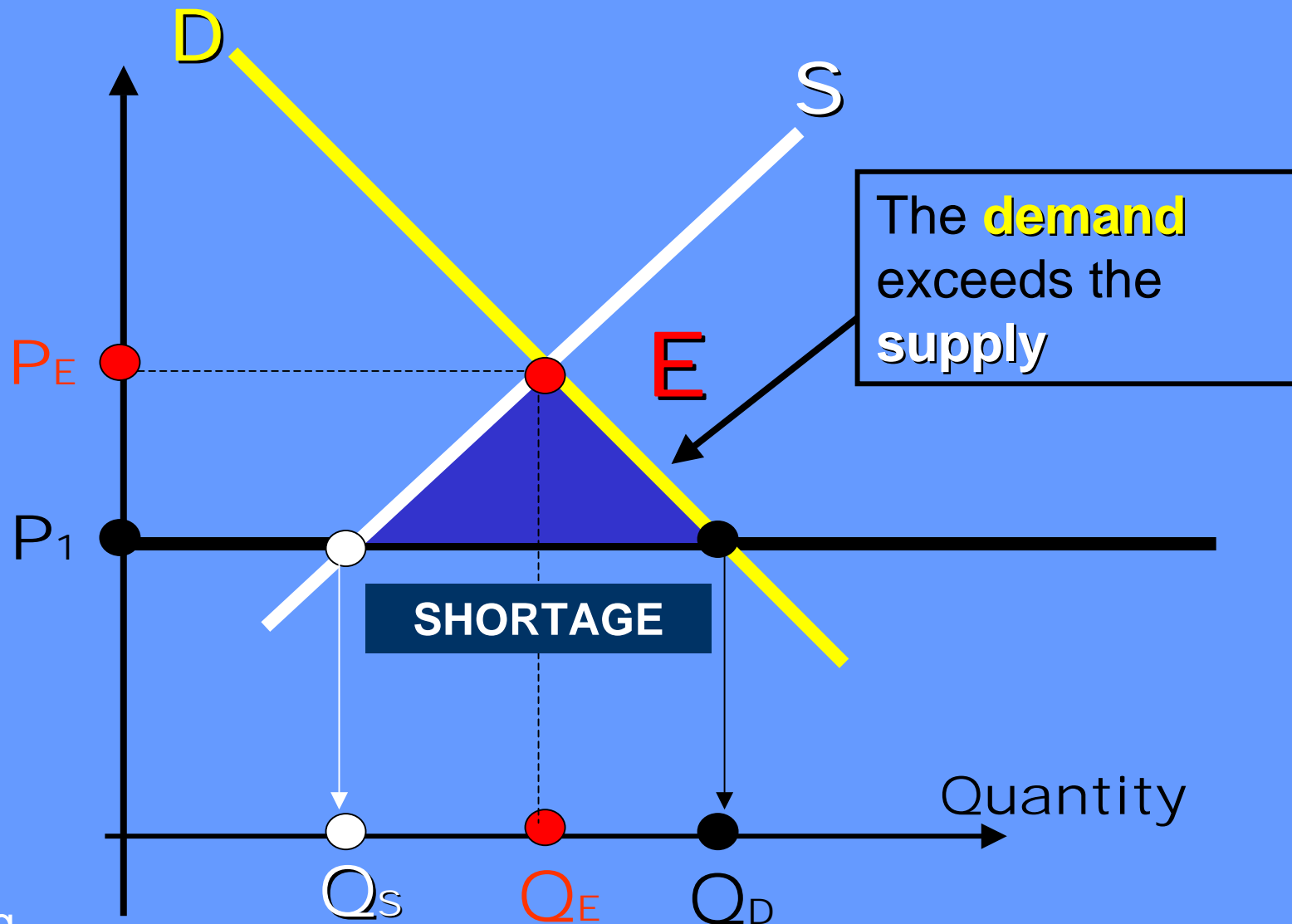
CONCLUSION 2: technological advances stimulates housing supply (shift to the right) lowering housing prices, increasing quantity of Housing that is demanded.



# 5.

## SHORTAGE AND SURPLUS

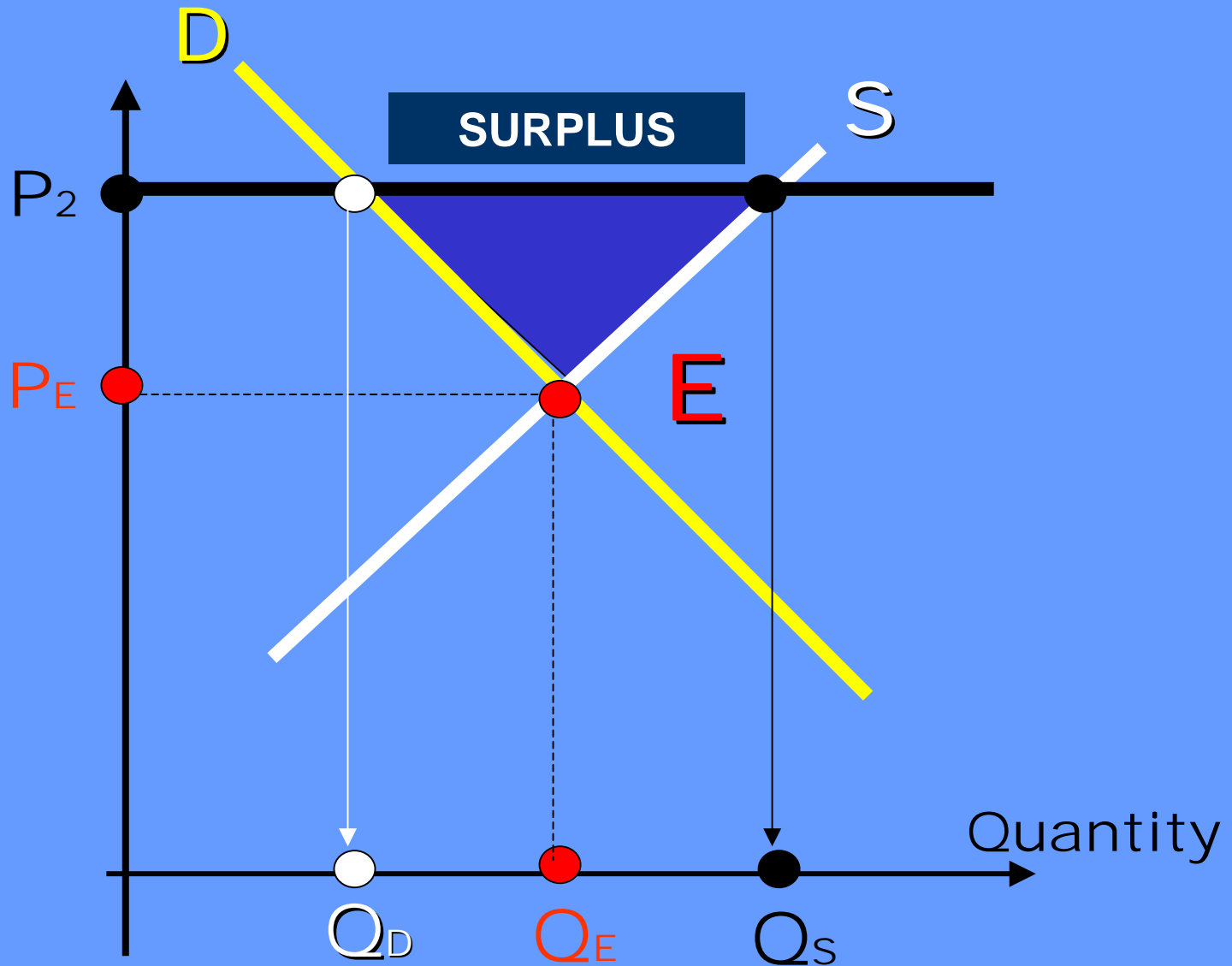
# SHORTAGE: quantity demanded greater than quantity supplied



Example:  
price Ceiling



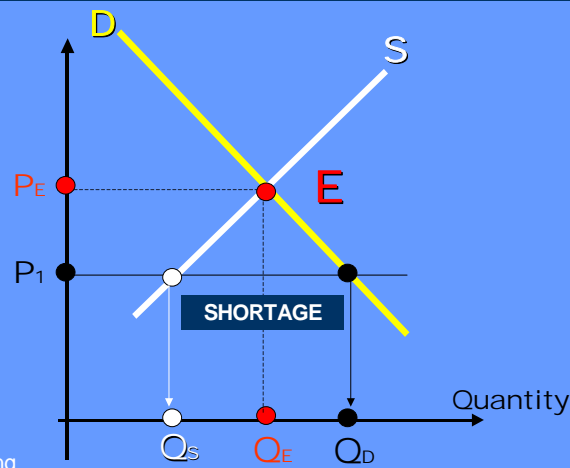
# SURPLUS: quantity supplied greater than quantity demanded.



Example:  
price Floor

# RENT CONTROL

**SHORTAGE:** quantity demanded greater than quantity supplied



Example:  
price Ceiling

Unregulated market rent = \$ 1,000.00 / month.

Rent control law sets rent = \$ 500.00/month

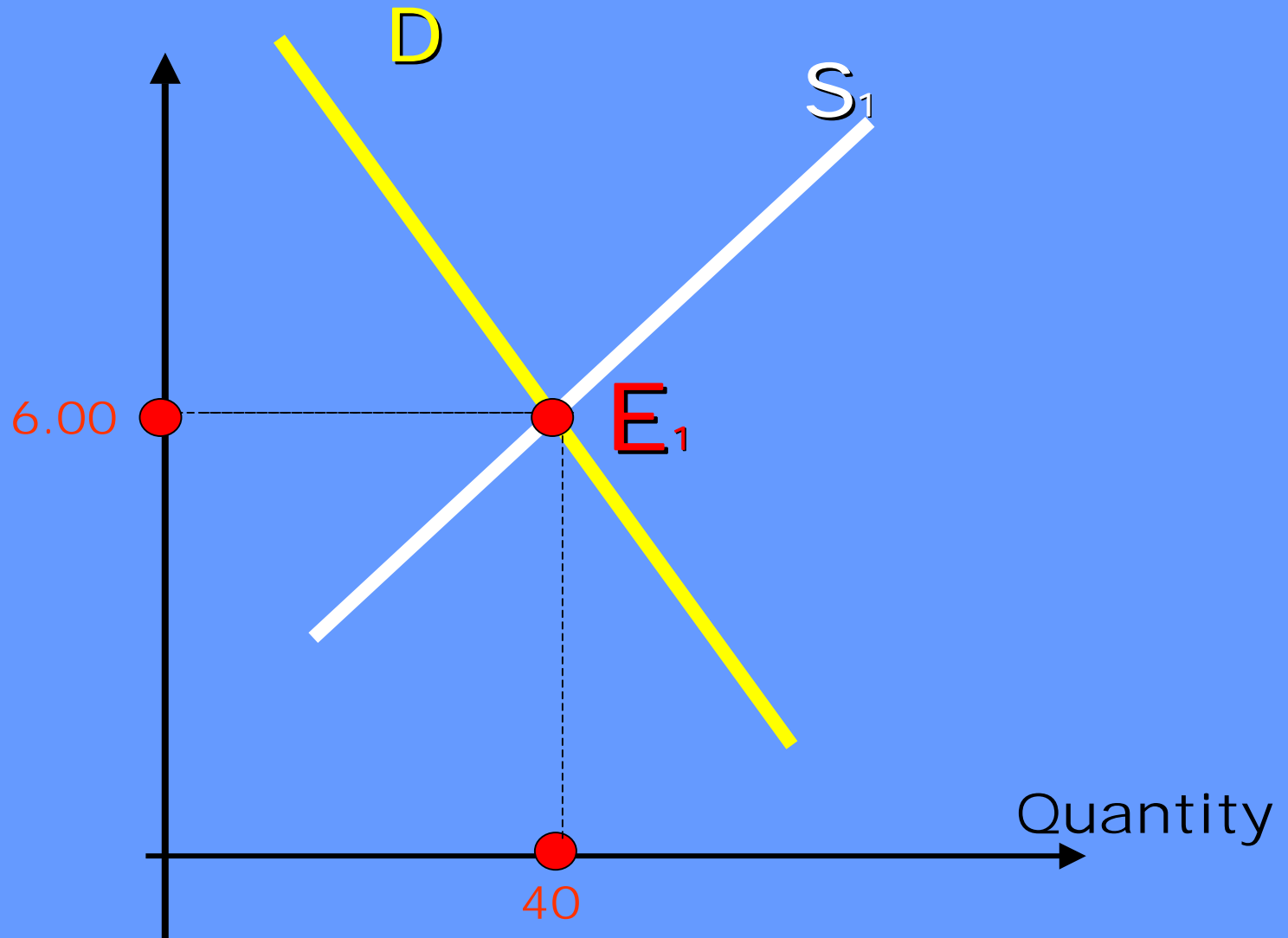
Figure shows that at rent controlled prices, not all consumers can find rent-controlled apartments.

1. Shortages develop because quantity demanded ( $Q_D$ ) is greater than quantity supplied ( $Q_S$ ).
2. People obtain units by luck, persistence or prior arrangements.
3. Black markets can also emerge: units that typically go for \$1,000.00/month are now only \$500.00/month. Black market might offer that unit for \$800.00, both seller and buyer would be money ahead.
4. Owners may have little incentive to maintain units, quality of controlled units may deteriorate.

The Economic Impact  
of Subsidy can be  
analysed in terms of  
shift in Supply and  
Demand

Subsidy can be thought as  
"negative tax".

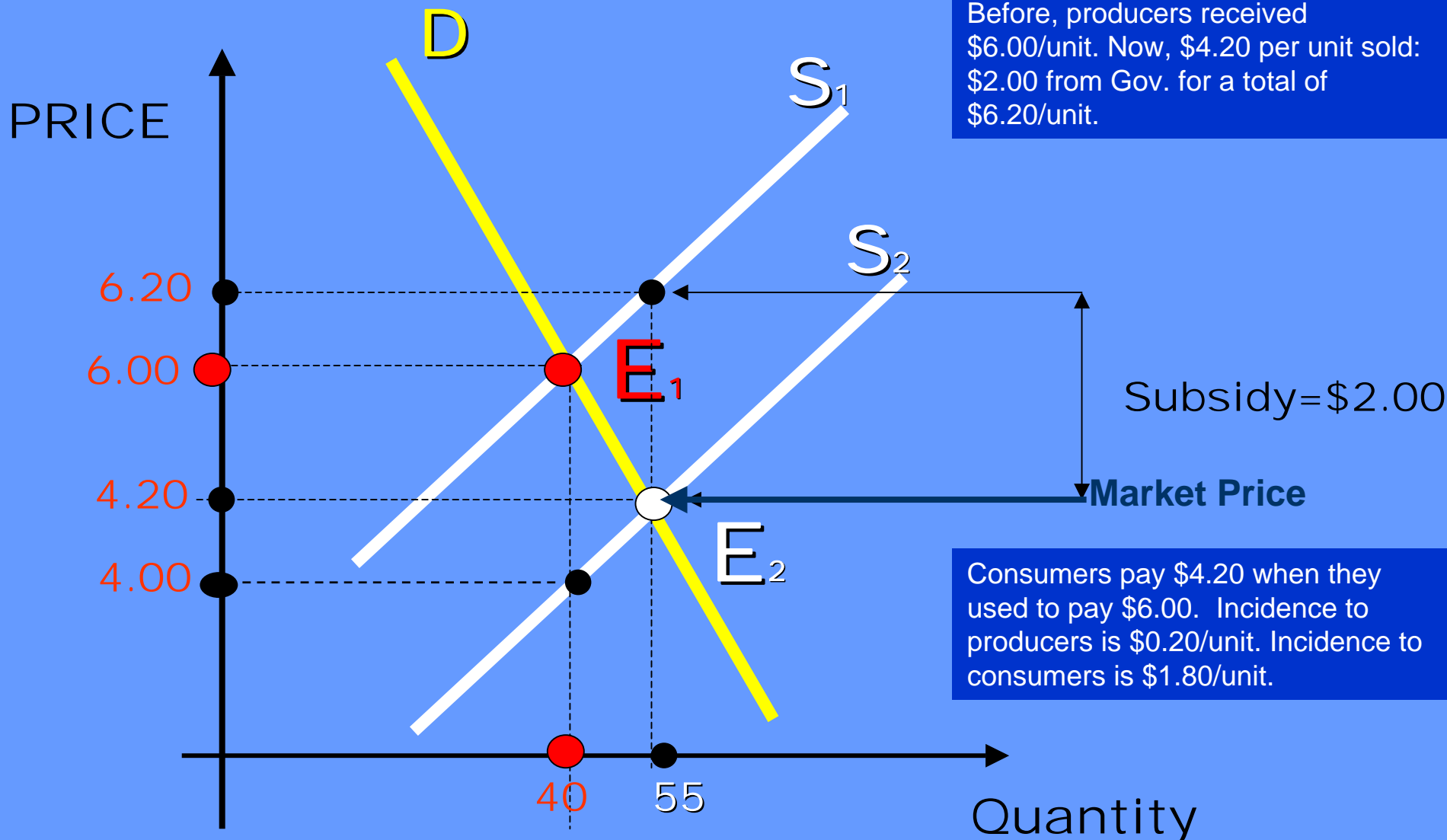
# Before Subsidy



# After $S_2$ Subsidy to PRODUCERS <sup>61</sup>

When subsidy is given to producers, they are willing to accept lower market prices

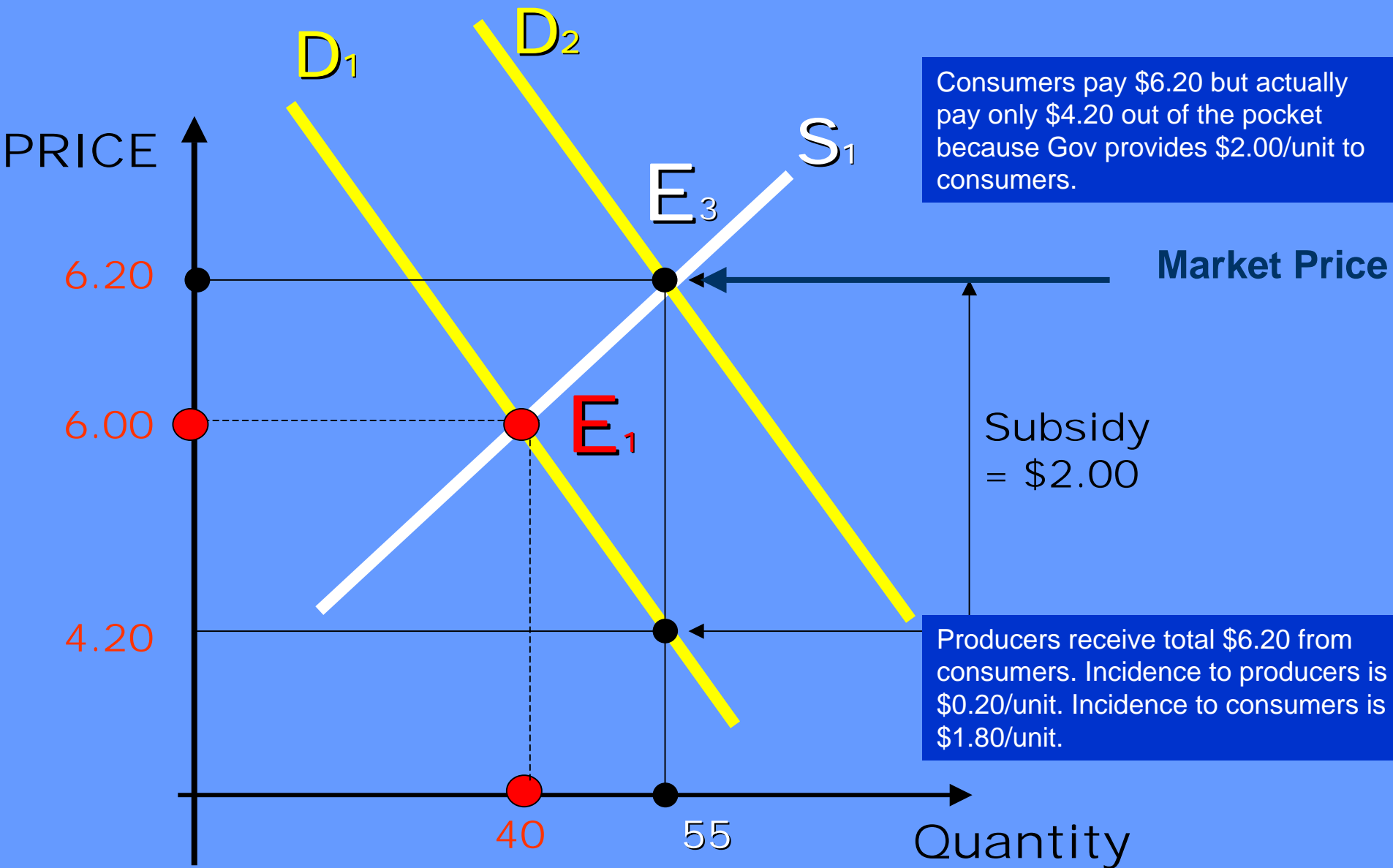
Before, producers received \$6.00/unit. Now, \$4.20 per unit sold: \$2.00 from Gov. for a total of \$6.20/unit.



Consumers pay \$4.20 when they used to pay \$6.00. Incidence to producers is \$0.20/unit. Incidence to consumers is \$1.80/unit.

# After $S_2$ Subsidy to Consumers

When subsidy is given to consumers, they pay a higher market price.



# BASIC CONCLUSIONS

Tax or Subsidy given to producer or consumer, the incidence would be the same amount, according to economic analysis, YET societal implications can differ!

Providing subsidy or imposing a tax will affect the market price of a good which affects all consumers and all producers. But not all will gain or lose equally.

**LOW INCOME HOUSING:** subsidy to producers or consumers?

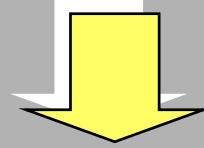
## GIVING TO PRODUCERS:

Subsidy could encourage new additions to housing stock, if sufficient to bridge gap between what target population could afford and the cost of construction. Further, need to oversight that subsidy serves the populations they are designed to assist.

## GIVING TO CONSUMERS:

Subsidy would allow to purchase housing that ordinarily may not have been affordable. Not necessarily provide new additions to housing stock. May not sufficiently increase the price to provide incentives to producers to increase the quantity or quality of housing stock.

# How Infrastructure provision affects Housing Supply?



1. If short in supply, serviced residential plots get a scarcity premium
2. Shortfall in infrastructure fees may elevate land prices
3. Infrastructure irresponsive to demand , supply of service land become inelastic and shifts in demand results increases in land and housing prices
4. The amount, type and price of infrastructure will influence the demand for complementary housing inputs, thus affecting the type of housing supplied in different locations, residential densities, and land and housing prices.



# 6.

## APPLYING THE AXIOM SUPPLY-DEMAND IN THE DESIGN OF HOUSING POLICIES

# Public Actions affect

## Housing Supply & Demand

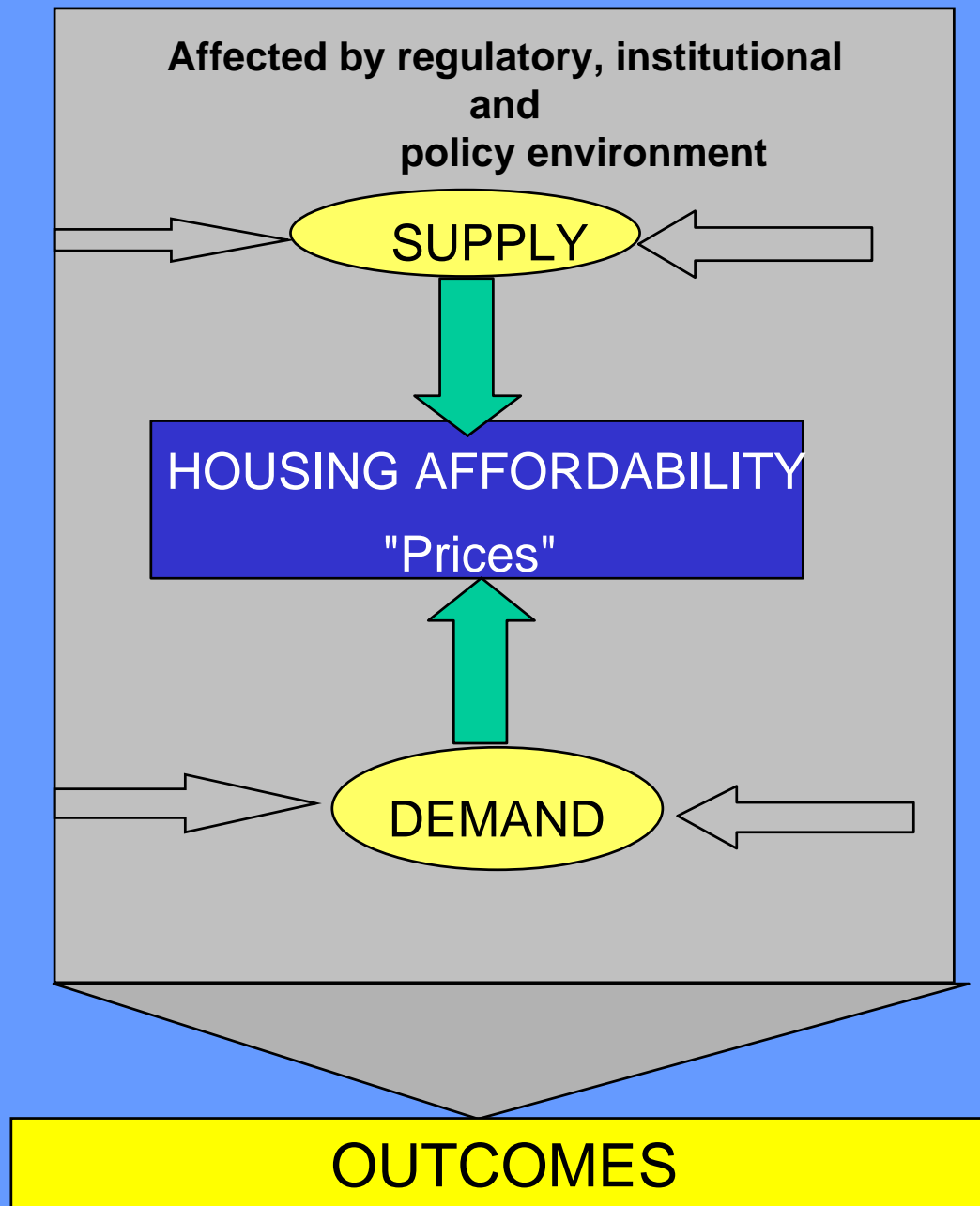
### DEMAND:

1. Tenure security
2. Property rights
3. Housing subsidies (rent control)
4. Taxes
5. Availability of Mortgage Finance

### SUPPLY:

1. Regulatory framework
2. Land use
3. Building regulations
4. Cost of inputs: land, labour, building materials
5. Efficiency of housing development process
6. Provision of infrastructure

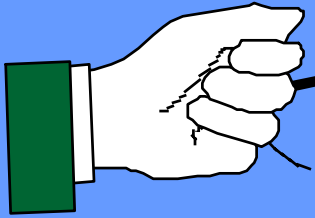
**BUT..** When supply is competitive, the long-run price of housing will be determined primarily by production costs rather than demand; increases in demand will be translated into increases in housing output and not into price increases. World Bank,



# **PART 3**

## **Principles of Policy Intervention**

# Enabling Instruments

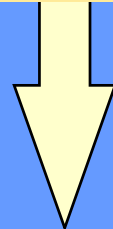


**DEMAND**



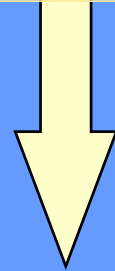
1. Property Rights
2. Finance
3. Subsidies

**SUPPLY**



4. Infrastructure
5. Development Regulation
6. Building Industry

**INSTITUTIONAL**



7. Institutional Framework

# Enabling Strategy

- Housing demand side

- a) Developing property rights
- b) Developing mortgage finance
- c) Rationalizing subsidies

- Housing supply side

- d) Providing infrastructure for residential land development
- e) Regulating land and housing development
- f) Organizing the building industry

# Enabling Strategy

- Both at the demand and the supply side

g) Developing the institutional framework for managing the housing sector

# DEMAND

## 1. PROPERTY RIGHTS

- Land registration
- Regularization
- Tenure & land rights

## 2. FINANCE

- Mortgage, lending and credits
- Regulations to collateral
- Titling, investment, savings

## 3. SUBSIDIES

- Rationalization, dismantling barriers
- Targeted subsidies
- Transparency



# SUPPLY

## 4. INFRASTRUCTURE

- Opens new opportunities for housing
- Servicing land according to technical economical & environmental sustainability
- Balance between costs & benefits of Land

## 5. DEVELOPMENT REGULATION

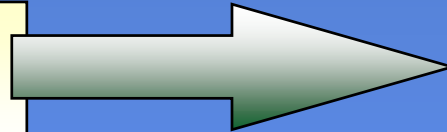
- Housing developments
- Facilitating the poor
- Environmentally sound alternatives
- Competition

## 6. BUILDING INDUSTRY

- Organization, non-monopolies, Coordination

# INSTITUTIONAL

## 7. INSTITUTIONAL FRAMEWORK

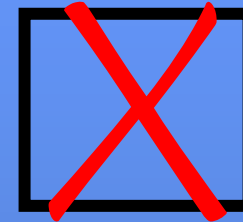


Mechanisms of monitoring housing sector  
Participation of private sector, NGO, etc.  
Research.

# 7.

## **DO's and DON'T's in HOUSING POLICY INTERVENTIONS**

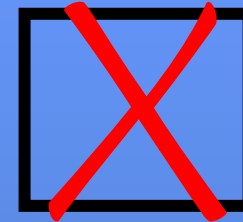
# DEVELOPING PROPERTY RIGHTS



- Regularise land tenure
- Expand land registration
- Enhance efficiency of social housing stock (partnerships or privatisation)
- Establish property taxation

- Undertake mass evictions
- Implement costly titling systems
- Nationalise land
- Discourage land transactions

# DEVELOPING MORTGAGE FINANCE



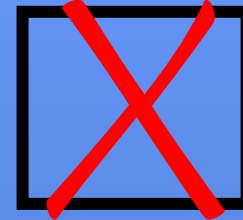
- **Allow private sector to lend**
- **Lend at market rates**
- **Enforce foreclosures**
- **Ensure prudent regulations**
- **Introduce better loan instruments**

- **Subsidise interest rates**
- **Discriminate against rental housing investment**
- **Neglect resource mobilisation**
- **Allow high default rates**

# RATIONALISING SUBSIDIES

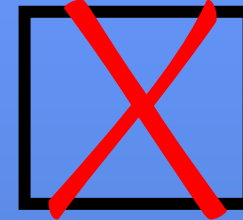


- **Make subsidies transparent**
- **Target subsidies to the poor**
- **Subsidise people, not houses**
- **Subject subsidies to review**



- **Allow hidden subsidies**
- **Use rent control as a subsidy**
- **Build subsidised public housing**
- **Let subsidies distort prices**

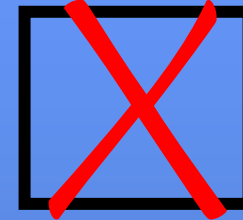
# PROVIDING INFRASTRUCTURE



- **Coordinate land development**
- **Emphasise cost recovery**
- **Base provision on demand**
- **Improve infrastructure in informal settlements**

- **Allow bias against infrastructure investment**
- **Use environmental concerns as reasons for slum clearance**

# REGULATING LAND & HOUSING DEVELOPMENT



- **Reduce regulatory complexity**
- **Assess costs of regulation**
- **Remove price distortions**
- **Remove artificial shortages**

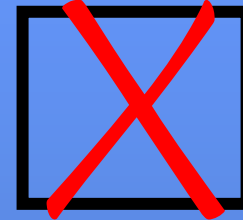
- **Impose unaffordable standards**
- **Maintain unenforceable rules**
- **Design projects without link to regulatory / institutional reform**



# ORGANISING THE BUILDING INDUSTRY

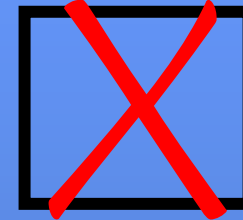


- **Eliminate monopoly practices**
- **Encourage small-firm entry**
- **Reduce import controls**
- **Support building research**



- **Allow long permit delays**
- **Institute regulations inhibiting competition**
- **Continue public monopolies**

# DEVELOPING POLICY & INSTITUTIONAL FRAMEWORK



- **Balance public / private sector roles**
- **Create forum to manage housing sector as a whole**
- **Develop enabling strategies**
- **Monitor sector performance**

- **Engage in direct public housing delivery**
- **Neglect local government role**
- **Retain financially unsustainable institutions**

**END**